ECS MID-ATLANTIC, LLC
Geotechnical • Construction Materials • Environmental • Facilities

July 20, 2010

Ms. Tamira Cohen
Environmental Specialist
Virginia Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060

ECS Project No.: 03-9739-A

Reference: Annual Acute Toxicity Testing – 2010
Wet & Dry Weather Outfalls 901 & 001
Doswell Truck Stop
VPDES Permit No. VA0052906

Dear Ms. Cohen:

ECS Mid-Atlantic, LLC is pleased to submit this Annual Acute Toxicity Testing Report for the above referenced site. Pursuant to the requirements of VPDES Permit No. VA0052906, Part D, samples are collected at outfalls 001 and 901, during dry and wet weather conditions respectively, and analyzed for the No Observed Adverse Effect Concentrations (NOAEC) of *Ceriodaphnia dubia* and *Pimephales promelas*. Previously, quarterly test results were required up until the final quarter of 2008. For the remainder of the permit, annual acute toxicity tests are required. The data collected from both the 001-Dry Weather and 901-Wet Weather Outfalls are provided below.

The Wet Weather Sample (Outfall 901) was collected on July 12, 2010 following a rainfall event while the Dry Weather Sample (Outfall 001) was collected on July 13, 2010. A grab sample was collected at each outfall using a dedicated polyethylene bailer. Following retrieval, the collected effluent was placed in laboratory supplied bottleware at wet-ice temperatures and transported under proper chain of custody protocols to Coastal Bioanalysts, Inc. (CBI) in Gloucester, Virginia. Due to the short hold time of the sample, the container was sent to CBI via overnight express delivery the same day as sample collection. Forty-eight (48) hour static acute tests (EPA Method #2001.0) were run using five (5) geometric dilutions of the effluent at 6.5, 13, 25, 50, and 100 percent concentrations of the original sample. A control test was also run using a moderately hard synthetic freshwater made with ASTM Type I deionized water. Four (4) replicates using five (5) organisms each were used for all dilutions to verify repeatability.

Sample results from the five (5) toxicity tests run are provided in Attachments 1 and 2 for Outfalls 901 and 001, respectively. As can be seen from the results, each of the dilutions and replicates resulted in a NOAEC of 100, which indicates no adverse effects were observed in either the *C. dubia* or *P. promelas* populations. It follows then that the toxicity tests report a 48-h LC_{50} greater than 100. The LC_{50} is defined as the sample concentration that will cause a 50% reduction in survival of the test organism. Thus, since no adverse effects were observed in the 100% sample concentration, the LC_{50} could not be determined as the effluent was shown to not cause observable acute adverse effects to these test organisms.

Pursuant to the schedule included in the facility's VPDES permit, this is the final Annual Acute Toxicity Report required for this permit cycle. As such, future report submissions, including timelines, will be determined with the upcoming permit renewal.

We appreciate your continued cooperation on this project. Should you have any questions or comments, please feel free to contact us at (804) 353-6333.

Respectfully submitted,

ECS MID-ATLANTIC, LLC

Adam M. Meurer, LEED AP, ISA-CA
Senior Environmental Scientist

Marlee A. Parker, REM/CSEM
Environmental Department Manager

W. Lloyd Ward, P.E.
Branch Manager, Vice President

Cc: Regina Mundi-DTS

ATTACHMENT 1

ANNUAL TOXICITY TEST RESULTS – OUTFALL 901

Client: Primary Laboratories, Inc.
Project ID: PRIM1002
Client Sample ID: Doswell Truck Stop Outfall 901
Permit No: VA0052906
Sample Period: 7/12/10 Wet Weather

Coastal Bioanalysts, Inc.

Report of Analysis: Whole Effluent Toxicity (WET)

Submitted To:	**Prepared By:**
Mr. David Stoneman Primary Laboratories, Inc. 7423 Lee Davis Road Mechanicsville, VA 23111	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Acute Test Results*				
Species-Test Method	**48-h LC50**	**95% C.L.**	**$T.U._{Ac}$**	**NOAEC**
C. dubia EPA 2002.0	>100	N/A	1.00	100
P. promelas EPA 2000.0	>100	N/A	1.00	100

*Note: Details regarding test conduct and data analysis provided in attached bench sheets and printouts as applicable.

AcuteTest Biological Summary Data		**Sample Concentration (%)**					
Species-Method	**Endpoint**	**Control**	**6.25**	**12.5**	**25.0**	**50.0**	**100**
C. dubia EPA 2002.0	Survival (%):	100	100	100	100	100	100
P. promelas EPA 2000.0	Survival (%):	100	100	100	95	100	100

Test Information **Species-Method**	**Start Date/Time** **End Date/Time**	**Organism Source**	**Hatch/Harvest Date/Time**	**Acclimation Temp.**	**Acclimation Water**	**Test Aerated?**
C. dubia EPA 2002.0	7/13/10 1505 7/15/10 1445	CBI Stock	7/12/10 2045 7/13/10 1030	25° C	Mod. Hard Syn. FW	No
P. promelas EPA 2000.0	7/13/10 1455 7/15/10 1435	CBI Stock	7/1/10 1030 7/2/10 1000	25° C	Mod. Hard Syn. FW	No

Sample/Dilution Water Data	**Acute Test**	
Water Quality Parameter (Units)	Sample	Dilution* Water
Arrival Temperature (°C)	1	N/A
Use Temperature (°C)	26	25
Conductivity (µS/cm)	422	303
pH (S.U.)	7.01	7.83
Dissolved Oxygen (mg/l)	7.2	8.2
Total Hardness (mg/l as $CaCO_3$)	68	84
Alkalinity (mg/l as $CaCO_3$)	48	60
Total Residual Chlorine (mg/l)	<Q.L.	N/A
Ammonia (mg/l NH_3-N)	<1.0	N/A

*Dilution water = Moderately hard synthetic freshwater

Sample Aging/Use/Pretreatment				
CBI Sample I.D.	**Collection Date/Time**	**Date(s)/Time(s) 1st Used in Tests**	**Date(s)/Time(s) Used in Renewals**	**Sample Adjustments**
PRIM1002-A	7/12/10 1420	7/13/10 1455, 1505	N/A	N/A

ACCREDITED IN ACCORDANCE WITH nelac
VELAP# 460030
EPA# VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM1002
Client Sample ID: Doswell Truck Stop Outfall 901
Permit No: VA0052906
Sample Period: 7/12/10 Wet Weather

Coastal Bioanalysts, Inc.

Acute Test Water Quality (Mean/Std. Dev.)												
Test:	*C. dubia* 2002.0						*P. promelas* 2000.0					
% Conc:	**Cont.**	**6.25**	**12.5**	**25.0**	**50.0**	**100**	**Cont.**	**6.25**	**12.5**	**25.0**	**50.0**	**100**
Temp.	25	25	25	25	25	25	25	25	25	25	25	25
(°C)	0	0	0	0	0.6	0.6	0	0	0	0	0.6	0.6
D.O.	8.1	8.1	8.0	7.9	7.8	7.5	7.9	7.8	7.4	7.3	7.2	6.8
(mg/l)	0.1	0.2	0.1	0.1	0.2	0.3	0.3	0.4	0.6	0.6	0.6	0.3
pH	7.93	7.88	7.83	7.75	7.61	7.41	7.73	7.69	7.65	7.52	7.36	7.15
(S.U.)	0.05	0.08	0.13	0.21	0.31	0.43	0.15	0.09	0.04	0.04	0.11	0.18

Acute Test QA/QC	Reference Toxicant: KCl Units: mg/l				Test Organism Source: CBI Stock Cultures
Species-Method (Ref. Test Date)	**Data Source**	**% Control Survival**	**48-h LC50**	**95% C.L./A.L. For LC50**	**RTT in Control?**
C. dubia 2002.0	RTT	100	646	616-678	Yes
(7/1/10-7/3/10)	CC	100	581	501-661	
P. promelas 2000.0	RTT	100	1031	953-1117	Yes
(7/1/10-7/3/10)	CC	99	962	814-1109	

Note: RTT = Reference Toxicant Test, CC = Control Chart

The results of analysis contained within this report relate only to the sample as received in the laboratory. This report shall not be reproduced except in full without written approval from the laboratory. Unless noted below, these test results meet all requirements of NELAC.

APPROVED:

Peter F. De Lisle, Ph.D.
Technical Director

7/20/10
Date

Deviations from, additions to, or exclusions from the test method, non-standard conditions or data qualifiers and, as appropriate, a statement of compliance/non-compliance: **NONE**

GLOSSARY OF TERMS AND ABBREVIATIONS

A.L. (Acceptance Limits): The results of a given reference toxicant test are compared to the control chart mean value ± 2 standard deviations. These limits approximate the 95% probability limits for the "true" reference toxicant value.

Chronic Value (ChrV): The geometric mean of the NOEC and LOEC. Units are same as test concentration units.

C.L. (Confidence Limits): These are the probability limits, based on the data set and statistical model employed, that the "true value" lies within the limits specified. Typically limits are based on 95% or 99% probabilities.

Control chart: A cumulative summary chart of results from QC tests with reference toxicants. The results of a given reference toxicant test are compared to the control chart mean value and 95% Acceptance Limits (A.L.) (mean ± 2 standard deviations).

IC25: The concentration of sample or chemical, calculated from the data set using statistical models, causing a 25% reduction in test organism growth, reproduction, etc. The lower the IC25, the more toxic the chemical or sample. Units are same as test concentration units.

VELAP# 460030
EPA# VA01116

Coastal Bioanalysts, Inc.

LC50: The concentration of sample or chemical, calculated from the data set using statistical models, causing a 50% reduction in test organism survival. The lower the LC50, the more toxic the chemical or sample. Units are same as test concentration units. Note: The LC50 value must always be associated with the duration of exposure. Thus 48-h LC50, 96-h LC50, etc. are calculated.

LOEC: Lowest-observable-effect-concentration. The lowest concentration of sample or chemical in a chronic test dilution series in which the test organisms exhibit a statistically significant reduction in any of the test end points (e.g. growth, survival, reproduction) compared to control organisms. Units are same as test concentration units.

PMSD: Percent Minimum Significant Difference: The minimum difference which can exist between a test treatment and the controls in a particular test and be statistically significant; a measure of test sensitivity. The lower the PMSD the more sensitive the test.

N/A: Not applicable.

N/D: Not determined or measured.

NOAEC: No-observable-acute-effect-concentration. The highest concentration of sample or chemical in an acute test dilution series in which the test organisms exhibit no statistically significant reduction in the test end point (e.g. survival) compared to control organisms. Units are same as test concentration units.

NOEC: No-observable-effect-concentration. The highest concentration of sample or chemical in a chronic test dilution series in which the test organisms exhibit no statistically significant reduction in any of the test end points (e.g. growth, survival, reproduction) compared to control organisms. Some regulatory definitions also require that the NOEC be less than the LOEC. Units are same as test concentration units.

Q.L.: Quantitation Limit. Level, concentration, or quantity of a target variable (analyte) that can be reported at a specified degree of confidence.

T.U.: Toxic units. Expresses the relative toxicity of an effluent in such a manner that the larger the toxic unit value the more toxic the effluent. $T.U._{Ac} = 100/LC50$. $T.U._{Chr} = 100/NOEC$. A dimensionless unit.

ACCREDITED IN ACCORDANCE WITH nelac
VELAP# 460030
EPA# VA01116

CERIODAPHNIA DUBIA STATIC ACUTE WET TEST (ACD) FORM ETF1051D

COASTAL BIOANALYSTS, INC
EFFECTIVE DATE: 2/1/09

% Effluent	I.D.	Day 0 Live	Day 1 Live	Day 2 Live	Final % Survival
Control	C-a	5	5	5	100
	C-b	5	5	5	
	C-c	5	5	5	
	C-d	5	5	5	
6.25	1-a	5	5	5	100
	1-b	5	5	5	
	1-c	5	5	5	
	1-d	5	5	5	
12.5	2-a	5	5	5	100
	2-b	5	5	5	
	2-c	5	5	5	
	2-d	5	5	5	

% Effluent	I.D.	Day 0 Live	Day 1 Live	Day 2 Live	Final % Survival
25.0	3-a	5	5	5	100
	3-b	5	5	5	
	3-c	5	5	5	
	3-d	5	5	5	
50.0	4-a	5	5	5	100
	4-b	5	5	5	
	4-c	5	5	5	
	4-d	5	5	5	
100	5-a	5	5	5	100
	5-b	5	5	5	
	5-c	5	5	5	
	5-d	5	5	5	
	Initials:	bja	PB	CA	
	Count Time:	1505	0920	1445	Test end time

NOTES:

Parameter	Treatment I.D.	Day 0	Day 1	Day 2
Temp. (°C)	C	25	25	25
	1	25	25	25
	2	25	25	25
	3	25	25	25
	4	26	25	25
	5	26	25	25
pH (S.U.)	C	7.90	7.90	2.99
	1	7.79	7.90	2.95
	2	7.69	7.88	2.93
	3	7.51	7.84	2.89
	4	7.27	7.71	2.86
	5	6.95	7.47	2.81
D.O. (mg/l)	C	8.2	8.1	8.0
	1	8.2	8.1	2.9
	2	8.1	8.0	2.9
	3	8.0	7.9	2.9
	4	7.8	7.6	2.9
	5	7.2	7.4	2.8
Conduct. (uS/cm)	C	306		293
	1	315		
	2	324		
	3	341		
	4	371		
	5	433		424
Replicate Meas.:		S	S	S
Initials:		bja	PB	CA
TRC (mg/l) in highest conc. at end of test:				NA

Species: *Ceriodaphnia dubia*

Source: **CBI stock cultures** ✓

Other:

Brood Release: **Date/time start:** 07/12/10 2045

Date /time end: 07/13/10 1030

Acclimation: **Water:** Mod. hard syn. FW ✓

Other

Temperature (°C): 25

Feeding: **Prior to test:** YCT/*Selenastrum*
During test: Not Fed

Illumination: 16L:8D 10-20 uE/m²/s

Test chamber size: ✓ **30 ml**

Solution volume: ✓ **15 ml** _____ **ml**

Number of replicates/treatment: 4

Initial number of daphnids/replicate: 5

Template number: 7

Set up: **Date (Day 0):** 07/13/10

Time water added: 1445

Time daphnids added: 1505

Set up by (initials): bja

Peer Rev. by: CBI PB Date: 2/15/10 TEST I.D. PRJM1002 ACD

PIMEPHALES PROMELAS STATIC ACUTE WET TEST
NOAEC-TYPE TEST (4 REPLICATES) (APP-4REP) FORM ETF1043E

COASTAL BIOANALYSTS, INC
EFFECTIVE DATE: 2/1/09

% Effluent	I.D.	Day 0 Live	Day 1 Live	Day 2 Live	Final % Survival
Control	C-a	5	5	5	100
	C-b	5	5	5	
	C-c	5	5	5	
	C-d	5	5	5	
6.25	1-a	5	5	5	100
	1-b	5	5	5	
	1-c	5	5	5	
	1-d	5	5	5	
12.5	2-a	5	5	5	100
	2-b	5	5	5	
	2-c	5	5	5	
	2-d	5	5	5	
25.0	3-a	5	5	5	95
	3-b	5	5	5	
	3-c	5	5	5	
	3-d	5	4	4	
50.0	4-a	5	5	5	100
	4-b	5	5	5	
	4-c	5	5	5	
	4-d	5	5	5	
100	5-a	5	5	5	100
	5-b	5	5	5	
	5-c	5	5	5	
	5-d	5	5	5	
	Initials:	bja	PB	CB	
	Count Time:	1455	0915	1435	Test End Time

NOTES:

Parameter	Treatment I.D.	Day 0	Day 1	Day 2
Temp. (°C)	C	25	25	25
	1	25	25	25
	2	25	25	25
	3	25	25	25
	4	26	25	25
	5	26	25	25
pH (S.U.)	C	7.90	7.67	7.63
	1	7.79	7.65	7.63
	2	7.69	7.62	7.63
	3	7.51	7.56	7.49
	4	7.27	7.34	7.46
	5	6.95	7.20	7.31
D.O. (mg/l)	C	8.2	7.9	7.7
	1	8.2	7.7	7.5
	2	8.1	7.0	7.2
	3	8.0	6.9	7.0
	4	7.8	6.8	6.9
	5	7.2	6.7	6.6
Conduct. (uS/cm)	C	306		305
	1	315		
	2	324		
	3	341		
	4	371		
	5	433		422
Replicate Measured:		A	B	D
Initials:		bja	PB	CB
TRC (mg/l) in highest conc. at end of test:				NA

Species: *Pimephales promelas*

Source: **CBI stock cultures** ✓

Other:

Hatch: **Date/time start:** 07/01/10 1030

Date /time end: 07/02/10 1000

Acclimation: **Water:** Mod. hard syn. FW ✓

Other

Temperature (°C): 25

Feeding: **Prior to test:** *Artemia ad libitum*
During test: Not Fed

Illumination: 16L:8D 10-20 uE/m²/s

Test chamber size: ✓ 400 ml _____ ml

Solution volume: ✓ 200 ml _____ ml

Initial number of fish/replicate: 5

Set up: **Date (Day 0):** 07/13/10

Time water added: 1445

Time fish added: 1455

Set up by (initials): bja

Peer Rev. by: CB / PB Date: 7/15/10

TEST I.D. PRPM1102 -APP-4REP

Acute Fish Test-48 Hr Survival

Start Date:	7/13/2010 14:55	Test ID:	PRIM1002	Sample ID:	DOSWELL TRUCK STOP 901
End Date:	7/15/2010 14:35	Lab ID:	CBI	Sample Type:	WW
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	PP-Pimephales promelas
Comments:					

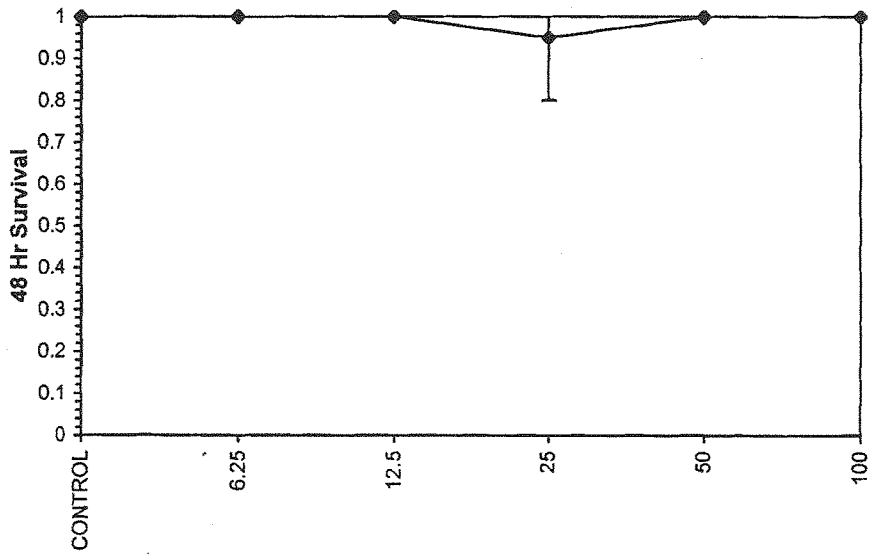
Conc-%	1	2	3	4
CONTROL	1.0000	1.0000	1.0000	1.0000
6.25	1.0000	1.0000	1.0000	1.0000
12.5	1.0000	1.0000	1.0000	1.0000
25	1.0000	1.0000	1.0000	0.8000
50	1.0000	1.0000	1.0000	1.0000
100	1.0000	1.0000	1.0000	1.0000

			Transform: Arcsin Square Root					Rank	1-Tailed
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical
CONTROL	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4		
6.25	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	18.00	10.00
12.5	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	18.00	10.00
25	0.9500	0.9500	1.2857	1.1071	1.3453	9.261	4	16.00	10.00
50	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	18.00	10.00
100	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	18.00	10.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.46508	0.884	-3.0206	13.9892
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	100	>100		1

Dose-Response Plot



ToxCalc v5.0.23

Reviewed by: PD

EFFLUENT SAMPLE & DILUTION WATER CHARACTERISTICS
FRESHWATER TESTS FORM ETF2031E

COASTAL BIOANALYSTS, INC
EFFECTIVE DATE: 1/14/10

INITIAL SAMPLE CHARACTERIZATION[1]					
Sample Bottle[2]	A-1				NOTES:
Tot. Res. Chlorine (mg/l)	<QL				
Hardness (mg/l $CaCO_3$)	48				
Alkalinity (mg/l $CaCO_3$)	48				
NH_3-N (mg/l)	<1.0				
Color/Appearance[3]	CY				
Obvious Odor?	ND				
Date/Time	7/13/1330				
Initials	CB				____ TRC corrected for potential positive interference by Mn or Cr with KI & $NaAsO_2$

SAMPLE PREPARATION MEASUREMENTS (100% concentration)								
Sample Bottle[2]	A-1							
Prep Temperature (°C)	26							
Conductivity (uS/cm)[4]	422							
D.O. (mg/l) After Warming	7.2							
Aeration Time (min)	—							
Adjusted D.O.	—							
Final pH (S.U.)	7.01							
Tot. Res. Chlorine (mg/l)[5]	N.D.							
Sample Filtered (60 um)?	ND							
Date/Time	7/13 1420							
Initials	bja							

DILUTION WATER CHARACTERISTICS								
Vat Number	1							
Temperature (°C)	25							
Conductivity (uS/cm)	303							
D.O. (mg/l)	8.2							
pH (S.U.)	7.83							
Hardness (mg/l $CaCO_3$)	84							
Alkalinity (mg/l $CaCO_3$)	60							
Date/Time	7/13 0830							
Initials	CB							

[1]Q.L. = Quantification Limit, N.D. = Not Determined/Measured, NA = Not Applicable
[2]Ninth character of Laboratory Sample I.D. (on chain of custody form) and bottle number in collection series (e.g. "A-2" is sample bottle number 2 from "A" collection). Together with project ID below constitutes entire sample bottle ID.
[3]C-Clear, O-Opaque, T-Turbid, S-Solids (SI-Slight, M-Moderate, H-Heavy), Y-Yellow, B-Brown, Bl-Black, G-Green
[4]Conductivity measured on first use of sample only
[5]Total residual chlorine measured after sample prep only if present in initial sample characterization

Peer Rev by PB Date 7/19/10 PROJECT I.D. PRIM1002
(First 8 characters of Laboratory Sample ID)

Coastal Bioanalysts
6400 Enterprise Court, Gloucester, VA 23061
PH: 804-694-8285, FAX: 804-695-1129
www.coastalbio.com

SAMPLE INFORMATION/CHAIN-OF-CUSTODY (FORM ETF2011E Rev. 4/15/09)

1007076

Lab Sample ID (Lab Use Only)

P	M	I	M	I	C	C	2	-	A
A	A	A	A	Y	Y	N	N		A
Project ID									Spl

WET

FACILITY INFORMATION

CLIENT/FACILITY NAME	Doswell Truck Stop	CONTACT & PHONE #	Adam Mercer 804-353-6333
NPDES PERMIT NO	VA0052906	OUTFALL # OR LOCATION	001
SAMPLE CHLORINATED?	N	SAMPLE DECHLORINATED? N	IF CHLORINE PRESENT UPON ARRIVAL AT LAB, DOES PERMIT SPECIFY DECHLORINATION OF SAMPLES?

TESTS REQUESTED:	SPECIES OR EPA METH #		
	C. dubia	ACUTE ☐	CHRONIC ☐
	P. promelas	ACUTE ☐	CHRONIC ☐

OTHER TESTS:

A SPECIFIC DILUTION SERIES MAY BE REQUIRED IN THE PERMIT. A DEFAULT SERIES OF 100, 50, 25, 12.5 AND 6.3%, OR CONCENTRATIONS USED IN PRIOR TESTING, WILL BE USED UNLESS INDICATED OTHERWISE. **IF IN DOUBT PLEASE ATTACH A COPY OF APPLICABLE PERMIT PAGES.**

GRAB SAMPLE INFORMATION

SAMPLE DATE	SAMPLE TIME	SAMPLE VOLUME
7/12/10	14:20	1 gal

COMPOSITE SAMPLE INFORMATION

SAMPLE START DATE & TIME	SAMPLE END DATE & TIME	AUTOSAMPLER TEMP. (°C)

TIME OR FLOW PROPORTIONAL COMPOSITE INFORMATION*	NUMBER SUBSAMPLES	VOL (ml) SUBSAMPLES	TIME INCREMENT
	SET VOLUME SUBSAMPLE	SET VOLUME FLOW	TOTAL VOLUME

*FOR VARIABLE VOLUME SUBSAMPLES BASED ON FLOW (COMPOSITING "BY HAND") ATTACH SAMPLE AND FLOW INFORMATION ON SEPARATE SHEET

FIELD MEASUREMENTS

DISCHARGE TEMP (°C)	DISCHARGE pH (S.U.)	SAMPLE TEMP (°C)	SAMPLE TRC (mg/l)	DATE/TIME (e.g. 02/23/00 1835)	INITIALS
27.2°C	8.59	27.2°C	<0.1 mg/L	7/12/10 14:25	AM

MEASUREMENTS MUST BE TAKEN WITHIN 15 MINUTES OF SAMPLE OR LAST SUBSAMPLE COLLECTION.

COMMENTS:

Adam Mercer BCS Mid-Atlantic, LLC _____ 7/12/10
(PRINTED NAME/AFFILIATION SAMPLER/ANALYST) (SIGNATURE) (DATE)

RELINQUISHED BY	DATE	TIME	RECEIVED BY
	7/13/10	1321	

SHIPPING METHOD: UPS____ FEDEX____ HAND DELIVERY____ OTHER ✓

CONDITION ON ARRIVAL: ACCEPTABLE ✓ OTHER_____

SAMPLE ARRIVAL TEMP: (°C) 1 ARRIVED ON ICE? YES ✓ NO____

NOTE: It is the responsibility of the sampler to insure that samples are properly collected, preserved (>0-6° C) and shipped. Sample hold time is 36 h. Additional costs may be incurred by improper preservation, shipping or receipt of samples after 3 p.m. or on weekends and holidays.

ATTACHMENT 2

ANNUAL TOXICITY TESTS RESULTS – OUTFALL 001

Client: Primary Laboratories, Inc.
Project ID: PRIM1003
Client Sample ID: Doswell Truck Stop Outfall 001
Permit No: VA0052906
Sample Period: 7/13/10 Dry Weather

Coastal Bioanalysts, Inc.

Report of Analysis: Whole Effluent Toxicity (WET)

Submitted To:	**Prepared By:**
Mr. David Stoneman Primary Laboratories, Inc. 7423 Lee Davis Road Mechanicsville, VA 23111	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Acute Test Results*				
Species-Test Method	**48-h LC50**	**95% C.L.**	**$T.U._{Ac}$**	**NOAEC**
C. dubia EPA 2002.0	>100	N/A	1.00	100
P. promelas EPA 2000.0	>100	N/A	1.00	100

*Note: Details regarding test conduct and data analysis provided in attached bench sheets and printouts as applicable.

AcuteTest Biological Summary Data		**Sample Concentration (%)**					
Species-Method	**Endpoint**	**Control**	**6.25**	**12.5**	**25.0**	**50.0**	**100**
C. dubia EPA 2002.0	Survival (%):	100	100	100	100	100	100
P. promelas EPA 2000.0	Survival (%):	100	100	100	100	100	100

Test Information **Species-Method**	**Start Date/Time** **End Date/Time**	**Organism Source**	**Hatch/Harvest Date/Time**	**Acclimation Temp.**	**Acclimation Water**	**Test Aerated?**
C. dubia EPA 2002.0	7/14/10 1615 7/16/10 1610	CBI Stock	7/13/10 1625 7/14/10 1010	25° C	Mod. Hard Syn. FW	No
P. promelas EPA 2000.0	7/14/10 1555 7/16/10 1600	CBI Stock	7/5/10 1600 7/6/10 1000	25° C	Mod. Hard Syn. FW	No

Sample/Dilution Water Data	**Acute Test**	
Water Quality Parameter (Units)	Sample	Dilution* Water
Arrival Temperature (°C)	4	N/A
Use Temperature (°C)	25	26
Conductivity (µS/cm)	296	301
pH (S.U.)	7.36	7.79
Dissolved Oxygen (mg/l)	8.2	8.2
Total Hardness (mg/l as $CaCO_3$)	72	92
Alkalinity (mg/l as $CaCO_3$)	28	59
Total Residual Chlorine (mg/l)	<Q.L.	N/A
Ammonia (mg/l NH_3-N)	<1.0	N/A

*Dilution water = Moderately hard synthetic freshwater

Sample Aging/Use/Pretreatment				
CBI Sample I.D.	**Collection Date/Time**	**Date(s)/Time(s) 1st Used in Tests**	**Date(s)/Time(s) Used in Renewals**	**Sample Adjustments**
PRIM1003-A	7/13/10 1325	7/14/10 1555, 1615	N/A	Aerated 2 min

VELAP# 460030
EPA# VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM1003
Client Sample ID: Doswell Truck Stop Outfall 001
Permit No: VA0052906
Sample Period: 7/13/10 Dry Weather

Coastal Bioanalysts, Inc.

Acute Test Water Quality (Mean/Std. Dev.)												
Test:	*C. dubia* 2002.0						*P. promelas* 2000.0					
% Conc:	**Cont.**	**6.25**	**12.5**	**25.0**	**50.0**	**100**	**Cont.**	**6.25**	**12.5**	**25.0**	**50.0**	**100**
Temp.	26	26	26	26	25	25	25	25	25	25	25	25
(°C)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
D.O.	7.9	7.9	7.7	7.4	7.3	7.4	7.6	7.6	7.5	7.3	7.2	7.1
(mg/l)	0.2	0.2	0.4	0.4	0.8	0.7	0.4	0.5	0.6	0.7	1.0	1.1
pH	7.87	7.87	7.86	7.81	7.71	7.53	7.76	7.74	7.69	7.63	7.52	7.28
(S.U.)	0.13	0.10	0.09	0.08	0.10	0.21	0.21	0.20	0.20	0.18	0.15	0.13

Acute Test QA/QC	Reference Toxicant: KCl	Units: mg/l		Test Organism Source: CBI Stock Cultures	
Species-Method (Ref. Test Date)	**Data Source**	**% Control Survival**	**48-h LC50**	**95% C.L./A.L. For LC50**	**RTT in Control?**
C. dubia 2002.0	RTT	100	646	616-678	Yes
(7/1/10-7/3/10)	CC	100	581	501-661	
P. promelas 2000.0	RTT	100	1031	953-1117	Yes
(7/1/10-7/3/10)	CC	99	962	814-1109	

Note: RTT = Reference Toxicant Test, CC = Control Chart

The results of analysis contained within this report relate only to the sample as received in the laboratory. This report shall not be reproduced except in full without written approval from the laboratory. Unless noted below, these test results meet all requirements of NELAC.

APPROVED:

Peter F. De Lisle, Ph.D.
Technical Director

7/20/10
Date

Deviations from, additions to, or exclusions from the test method, non-standard conditions or data qualifiers and, as appropriate, a statement of compliance/non-compliance: **NONE**

GLOSSARY OF TERMS AND ABBREVIATIONS

A.L. (Acceptance Limits): The results of a given reference toxicant test are compared to the control chart mean value ± 2 standard deviations. These limits approximate the 95% probability limits for the "true" reference toxicant value.

Chronic Value (ChrV): The geometric mean of the NOEC and LOEC. Units are same as test concentration units.

C.L. (Confidence Limits): These are the probability limits, based on the data set and statistical model employed, that the "true value" lies within the limits specified. Typically limits are based on 95% or 99% probabilities.

Control chart: A cumulative summary chart of results from QC tests with reference toxicants. The results of a given reference toxicant test are compared to the control chart mean value and 95% Acceptance Limits (A.L.) (mean ± 2 standard deviations).

IC25: The concentration of sample or chemical, calculated from the data set using statistical models, causing a 25% reduction in test organism growth, reproduction, etc. The lower the IC25, the more toxic the chemical or sample. Units are same as test concentration units.

VELAP# 460030
EPA# VA01116

Coastal Bioanalysts, Inc.

LC50: The concentration of sample or chemical, calculated from the data set using statistical models, causing a 50% reduction in test organism survival. The lower the LC50, the more toxic the chemical or sample. Units are same as test concentration units. Note: The LC50 value must always be associated with the duration of exposure. Thus 48-h LC50, 96-h LC50, etc. are calculated.

LOEC: Lowest-observable-effect-concentration. The lowest concentration of sample or chemical in a chronic test dilution series in which the test organisms exhibit a statistically significant reduction in any of the test end points (e.g. growth, survival, reproduction) compared to control organisms. Units are same as test concentration units.

PMSD: Percent Minimum Significant Difference: The minimum difference which can exist between a test treatment and the controls in a particular test and be statistically significant; a measure of test sensitivity. The lower the PMSD the more sensitive the test.

N/A: Not applicable.

N/D: Not determined or measured.

NOAEC: No-observable-acute-effect-concentration. The highest concentration of sample or chemical in an acute test dilution series in which the test organisms exhibit no statistically significant reduction in the test end point (e.g. survival) compared to control organisms. Units are same as test concentration units.

NOEC: No-observable-effect-concentration. The highest concentration of sample or chemical in a chronic test dilution series in which the test organisms exhibit no statistically significant reduction in any of the test end points (e.g. growth, survival, reproduction) compared to control organisms. Some regulatory definitions also require that the NOEC be less than the LOEC. Units are same as test concentration units.

Q.L.: Quantitation Limit. Level, concentration, or quantity of a target variable (analyte) that can be reported at a specified degree of confidence.

T.U.: Toxic units. Expresses the relative toxicity of an effluent in such a manner that the larger the toxic unit value the more toxic the effluent. $T.U._{Ac} = 100/LC50$. $T.U._{Chr} = 100/NOEC$. A dimensionless unit.

ACCREDITED IN ACCORDANCE WITH nelac
VELAP# 460030
EPA# VA01116

CERIODAPHNIA DUBIA STATIC ACUTE WET TEST (ACD) FORM ETF1051D

COASTAL BIOANALYSTS, INC
EFFECTIVE DATE: 2/1/09

% Effluent	I.D.	Day 0 Live	Day 1 Live	Day 2 Live	Final % Survival
Control	C-a	5	5	5	100
	C-b	5	5	5	
	C-c	5	5	5	
	C-d	5	5	5	
6.25	1-a	5	5	5	100
	1-b	5	5	5	
	1-c	5	5	5	
	1-d	5	5	5	
12.5	2-a	5	5	5	100
	2-b	5	5	5	
	2-c	5	5	5	
	2-d	5	5	5	
25.0	3-a	5	5	5	100
	3-b	5	5	5	
	3-c	5	5	5	
	3-d	5	5	5	
50.0	4-a	5	5	5	100
	4-b	5	5	5	
	4-c	5	5	5	
	4-d	5	5	5	
100	5-a	5	5	5	100
	5-b	5	5	5	
	5-c	5	5	5	
	5-d	5	5	5	
	Initials:	bja	CB	CB	
	Count Time:	1615	0930	1020	Test end time

NOTES:

Parameter	Treatment I.D.	Day 0	Day 1	Day 2
Temp. (°C)	C	26	25	26
	1	26	25	26
	2	26	25	26
	3	26	25	26
	4	25	25	26
	5	25	25	26
pH (S.U.)	C	7.98	7.73	7.91
	1	7.94	7.75	7.92
	2	7.91	7.75	7.91
	3	7.83	7.73	7.85
	4	7.68	7.63	7.82
	5	7.39	7.43	7.77
D.O. (mg/l)	C	8.1	7.8	7.9
	1	8.1	7.8	7.8
	2	8.1	7.4	7.6
	3	8.1	7.0	7.1
	4	8.2	6.8	7.0
	5	8.2	6.9	7.0
Conduct. (uS/cm)	C	307		298
	1	302		
	2	301		
	3	300		
	4	298		
	5	296		300
Replicate Meas.:		S	S	B
Initials:		bja	CB	CB
TRC (mg/l) in highest conc. at end of test:				NA

Species: *Ceriodaphnia dubia*

Source: CBI stock cultures ✓

Other: _____

Brood Release: Date/time start: 07/13/10 1625

Date /time end: 07/14/10 1010

Acclimation: **Water:** Mod. hard syn. FW ✓

Other _____

Temperature (°C): 25

Feeding: **Prior to test:** YCT/*Selenastrum*
During test: Not Fed

Illumination: 16L:8D 10-20 uE/m²/s

Test chamber size: ✓ 30 ml

Solution volume: ✓ 15 ml _____ ml

Number of replicates/treatment: 4

Initial number of daphnids/replicate: 5

Template number: 13

Set up: Date (Day 0): 07/14/10

Time water added: 1545

Time daphnids added: 1615

Set up by (initials): bja

Peer Rev. by: PA Date: 7/19/10 TEST I.D. PRIM1003 ACD

PIMEPHALES PROMELAS STATIC ACUTE WET TEST
NOAEC-TYPE TEST (4 REPLICATES) (APP-4REP) FORM ETF1043E

COASTAL BIOANALYSTS, INC
EFFECTIVE DATE: 2/1/09

% Effluent	I.D.	Day 0 Live	Day 1 Live	Day 2 Live	Final % Survival
Control	C-a	5	5	5	100
	C-b	5	5	5	
	C-c	5	5	5	
	C-d	5	5	5	
6.25	1-a	5	5	5	100
	1-b	5	5	5	
	1-c	5	5	5	
	1-d	5	5	5	
12.5	2-a	5	5	5	100
	2-b	5	5	5	
	2-c	5	5	5	
	2-d	5	5	5	
25.0	3-a	5	5	5	100
	3-b	5	5	5	
	3-c	5	5	5	
	3-d	5	5	5	
50.0	4-a	5	5	5	100
	4-b	5	5	5	
	4-c	5	5	5	
	4-d	5	5	5	
100	5-a	5	5	5	100
	5-b	5	5	5	
	5-c	5	5	5	
	5-d	5	5	5	
	Initials:	bja	CB	CB	
	Count Time:	1555	0435	1000	Test End Time

NOTES:

Parameter	Treatment I.D.	Day 0	Day 1	Day 2
Temp. (°C)	C	26	25	25
	1	26	25	25
	2	26	25	25
	3	26	25	25
	4	25	25	25
	5	25	25	25
pH (S.U.)	C	7.98	7.56	7.75
	1	7.94	7.55	7.74
	2	7.91	7.52	7.65
	3	7.83	7.47	7.59
	4	7.68	7.34	7.50
	5	7.39	7.13	7.32
D.O. (mg/l)	C	8.1	7.3	7.5
	1	8.1	7.2	7.4
	2	8.1	7.0	7.4
	3	8.1	6.7	7.2
	4	8.2	6.3	7.1
	5	8.2	6.0	7.0
Conduct. (uS/cm)	C	307		298
	1	302		
	2	301		
	3	300		
	4	298		
	5	296		296
Replicate Measured:		B	A	C
Initials:		bja	CB	CB
TRC (mg/l) in highest conc. at end of test:				NA

Species: *Pimephales promelas*

Source: **CBI stock cultures** ✓

Other:

Hatch: **Date/time start:** 07/05/10 1600

Date /time end: 07/06/10 1000

Acclimation: **Water:** Mod. hard syn. FW ✓

Other

Temperature (°C): 25

Feeding: **Prior to test:** *Artemia ad libitum*
During test: Not Fed

Illumination: 16L:8D 10-20 uE/m^2/s

Test chamber size: ✓ **400 ml** _____ **ml**

Solution volume: ✓ **200 ml** _____ **ml**

Initial number of fish/replicate:

Set up: **Date (Day 0):** 07/14/10

Time water added: 1545

Time fish added: 1555

Set up by (initials): bja

Peer Rev. by: PB Date: 7/19/10

TEST I.D. PRIM1003 -APP-4REP

EFFLUENT SAMPLE & DILUTION WATER CHARACTERISTICS
FRESHWATER TESTS FORM ETF2031E

COASTAL BIOANALYSTS, INC
EFFECTIVE DATE: 1/14/10

INITIAL SAMPLE CHARACTERIZATION[1]					NOTES:
Sample Bottle[2]	A-1				
Tot. Res. Chlorine (mg/l)	<QL				
Hardness (mg/l $CaCO_3$)	72				
Alkalinity (mg/l $CaCO_3$)	28				
NH_3-N (mg/l)	<1.0				
Color/Appearance[3]	CBSSI				
Obvious Odor?	NO				
Date/Time	7/14 1500				
Initials	bja				____ TRC corrected for potential positive interference by Mn or Cr with KI & $NaAsO_2$

SAMPLE PREPARATION MEASUREMENTS (100% concentration)								
Sample Bottle[2]	A-1							
Prep Temperature (°C)	25							
Conductivity (uS/cm)[4]	296							
D.O. (mg/l) After Warming	8.9							
Aeration Time (min)	2.0							
Adjusted D.O.	8.2							
Final pH (S.U.)	7.36							
Tot. Res. Chlorine (mg/l)[5]	N.D.							
Sample Filtered (60 um)?	NO							
Date/Time	7/14 1530							
Initials	bja							

DILUTION WATER CHARACTERISTICS								
Vat Number	2							
Temperature (°C)	26							
Conductivity (uS/cm)	301							
D.O. (mg/l)	8.2							
pH (S.U.)	7.79							
Hardness (mg/l $CaCO_3$)	92							
Alkalinity (mg/l $CaCO_3$)	59							
Date/Time	7/14 0840							
Initials	RB							

[1]Q.L. = Quantification Limit, N.D. = Not Determined/Measured, NA = Not Applicable
[2]Ninth character of Laboratory Sample I.D. (on chain of custody form) and bottle number in collection series (e.g. "A-2" is sample bottle number 2 from "A" collection). Together with project ID below constitutes entire sample bottle ID.
[3]C-Clear, O-Opaque, T-Turbid, S-Solids (Sl-Slight, M-Moderate, H-Heavy), Y-Yellow, B-Brown, Bl-Black, G-Green
[4]Conductivity measured on first use of sample only
[5]Total residual chlorine measured after sample prep only if present in initial sample characterization

Peer Rev by GP Date 7/19/10 PROJECT I.D. PRIM1003
(First 8 characters of Laboratory Sample ID)

Coastal Bioanalysts
6400 Enterprise Court, Gloucester, VA 23061
PH: 804-694-8285, FAX: 804-695-1129
www.coastalbio.com

DS

SAMPLE INFORMATION/CHAIN-OF-CUSTODY (FORM ETF2011E Rev. 4/15/09)

1007084

Lab Sample ID (Lab Use Only)

P	K	I	M	1	0	0	3	-	A
A	A	A	A	Y	Y	N	N		A
Project ID									Spl

DRY

FACILITY INFORMATION

CLIENT/FACILITY NAME: Doswell Truck Stop		CONTACT & PHONE #: Adam Mercer 804-353-6333	
NPDES PERMIT NO: VA 0052906			OUTFALL # OR LOCATION: 001
SAMPLE CHLORINATED? N	SAMPLE DECHLORINATED? N	IF CHLORINE PRESENT UPON ARRIVAL AT LAB, DOES PERMIT SPECIFY DECHLORINATION OF SAMPLES?	

TESTS REQUESTED:	SPECIES OR EPA METH #: C. dubia	ACUTE ☑	CHRONIC ☐
	SPECIES OR EPA METH #: P. promelas	ACUTE ☑	CHRONIC ☐
OTHER TESTS:			

A SPECIFIC DILUTION SERIES MAY BE REQUIRED IN THE PERMIT. A DEFAULT SERIES OF 100, 50, 25, 12.5 AND 6.3%, OR CONCENTRATIONS USED IN PRIOR TESTING, WILL BE USED UNLESS INDICATED OTHERWISE. IF IN DOUBT PLEASE ATTACH A COPY OF APPLICABLE PERMIT PAGES.

GRAB SAMPLE INFORMATION

SAMPLE DATE	SAMPLE TIME	SAMPLE VOLUME
7/13/10	13:25	1 gal

COMPOSITE SAMPLE INFORMATION

SAMPLE START DATE & TIME	SAMPLE END DATE & TIME	AUTOSAMPLER TEMP. (°C)

TIME OR FLOW PROPORTIONAL COMPOSITE INFORMATION	NUMBER SUBSAMPLES	VOL (ml) SUBSAMPLES	TIME INCREMENT
	SET VOLUME SUBSAMPLE	SET VOLUME FLOW	TOTAL VOLUME

FOR VARIABLE VOLUME SUBSAMPLES BASED ON FLOW (COMPOSITING "BY HAND") ATTACH SAMPLE AND FLOW INFORMATION ON SEPARATE SHEET

FIELD MEASUREMENTS

DISCHARGE TEMP (°C)	DISCHARGE pH (S.U.)	SAMPLE TEMP (°C)	SAMPLE TRC (mg/l)	DATE/TIME (e.g. 02/23/00 1835)	INITIALS
28.0°C	7.96	28.0°C	0.3 mg/L	7/13/10 13:30	AMM

MEASUREMENTS MUST BE TAKEN WITHIN 15 MINUTES OF SAMPLE OR LAST SUBSAMPLE COLLECTION.

COMMENTS:

Adam Mercer, ECS Mid-Atlantic LLC _____ 7/13/10
(PRINTED NAME/AFFILIATION SAMPLER/ANALYST) (SIGNATURE) (DATE)

RELINQUISHED BY	DATE	TIME	RECEIVED BY
	7/14/10	1445	Beverly Jones-Anderson

SHIPPING METHOD: UPS____ FEDEX X HAND DELIVERY____ OTHER_____

CONDITION ON ARRIVAL: ACCEPTABLE X OTHER_____

SAMPLE ARRIVAL TEMP: (°C) 4 ARRIVED ON ICE? YES X NO____

NOTE: It is the responsibility of the sampler to insure that samples are properly collected, preserved (>0-6° C) and shipped. Sample hold time is 36 h. Additional costs may be incurred by improper preservation, shipping or receipt of samples after 3 p.m. or on weekends and holidays.

ECS MID-ATLANTIC, LLC
"Setting the Standard for Service"
Geotechnical • Construction Materials • Environmental • Facilities

July 29, 2009

Ms. Tamira Cohen
Environmental Specialist
Virginia Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060

ECS Project No.: 03-9739-A

Reference: Annual Acute Toxicity Testing – 2009 – Wet Weather Outfall 901
Doswell All American Travel Plaza
VPDES Permit No. VA0052906

Dear Ms. Cohen:

ECS Mid-Atlantic, LLC is pleased to submit this Annual Acute Toxicity Testing Report for the above referenced site. Pursuant to the requirements of VPDES Permit No. VA0052906, Part D, samples are collected at outfalls 001 and 901, during dry and wet weather conditions respectively, and analyzed for the No Observed Adverse Effect Concentrations (NOAEC) of *Ceriodaphnia dubia* and *Pimephales promelas*. Previously, quarterly test results were required up until the final quarter of 2008. For the remainder of the permit, annual acute toxicity tests are required with data submission in July of each subsequent permit year. The results of the annual toxicity tests for the 001-Dry Weather Outfall for 2009 were previously submitted under separate cover. The data collected from the 901-Wet Weather Outfall is provided below.

The Wet Weather Sample (Outfall 901) was collected on July 21, 2009. A grab sample was collected using a dedicated polyethylene bailer at the outfall discharge location. Following retrieval, the collected effluent was placed in laboratory supplied bottleware at wet-ice temperatures and transported under proper chain of custody protocols to Coastal Bioanalysts, Inc. (CBI) in Gloucester, Virginia. Due to the short hold time of the sample, the container was sent to CBI via overnight express delivery the same day as sample collection. Forty-eight (48) hour static acute tests (EPA Method #2001.0) were run using five (5) geometric dilutions of the effluent at 6.5, 13, 25, 50, and 100 percent concentrations of the original sample. A control test was also run using a moderately hard synthetic freshwater made with ASTM Type I deionized water. Four (4) replicates using five (5) organisms each were used for all dilutions to verify repeatability.

Sample results from the five (5) toxicity tests run are provided in Attachment 1. As can be seen from the results, each of the dilutions and replicates resulted in a NOAEC of 100, which indicates no adverse effects were observed in either the *C. dubia* or *P. promelas* populations. It follows then that the toxicity tests report a 48-h LC_{50} greater than 100. The LC_{50} is defined as the sample concentration that will cause a 50% reduction in survival of the test organism. Thus, since no adverse effects were observed in the 100% sample concentration, the LC_{50} could not be determined as the

July 29, 2009

Ms. Tamira Cohen
Environmental Specialist
Virginia Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060

ECS Project No.: 03-9739-A

Reference: Annual Acute Toxicity Testing – 2009 – Wet Weather Outfall 901
Doswell All American Travel Plaza
VPDES Permit No. VA0052906

Dear Ms. Cohen:

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The Wet Weather Sample (Outfall 901) was collected on July 21, 2009. A grab sample was collected using a dedicated polyethylene bailer at the outfall discharge location. Following retrieval, the collected effluent was placed in laboratory supplied bottleware at wet-ice temperatures and transported under proper chain of custody protocols to Coastal Bioanalysts, Inc. (CBI) in Gloucester, Virginia. Due to the short hold time of the sample, the container was sent to CBI via overnight express delivery the same day as sample collection. Forty-eight (48) hour static acute tests (EPA Method #2001.0) were run using five (5) geometric dilutions of the effluent at 6.5, 13, 25, 50, and 100 percent concentrations of the original sample. A control test was also run using a moderately hard synthetic freshwater made with ASTM Type I deionized water. Four (4) replicates using five (5) organisms each were used for all dilutions to verify repeatability.

Sample results from the five (5) toxicity tests run are provided in Attachment 1. As can be seen from the results, each of the dilutions and replicates resulted in a NOAEC of 100, which indicates no adverse effects were observed in either the *C. dubia* or *P. promelas* populations. It follows then that the toxicity tests report a 48-h LC_{50} greater than 100. The LC_{50} is defined as the sample concentration that will cause a 50% reduction in survival of the test organism. Thus, since no adverse effects were observed in the 100% sample concentration, the LC_{50} could not be determined as the

effluent was shown to not cause observable acute adverse effects to these test organisms.

Pursuant to the Written Response to Warning Letter #W2008-04-P-1003 issued by your office on May 7, 2008, the next Acute Toxicity Test Report is due on July 10, 2010, as annual reporting is required for the remainder of the permit. The July 2010 report will include test results for both Wet and Dry Weather Outfall (001 and 901) effluent collected between July 2009 and June 2010.

We appreciate your continued cooperation on this project. Should you have any questions or comments, please feel free to contact us at (804) 353-6333.

Respectfully submitted,

ECS MID-ATLANTIC, LLC

Adam M. Meurer, LEED AP, ISA-CA
Senior Environmental Scientist

Marlee A. Parker
Environmental Department Manager

W. Lloyd Ward, P.E.
Branch Manager, Vice President

Cc: Regina Mundi-DTS
Allison Dunaway - DEQ-PRO

ATTACHMENT 1

ANNUAL TOXICITY TEST RESULTS

Client: Primary Laboratories, Inc.
Project ID: PRIM0902
Client Sample ID: Doswell Truck Stop Outfall 001
Permit No: VA0052906
Sample Period: 7/21/09 Wet Weather

Coastal Bioanalysts, Inc.

Report of Analysis: Whole Effluent Toxicity (WET)

Submitted To:	Prepared By:
Mr. David Stoneman Primary Laboratories, Inc. 7423 Lee Davis Road Mechanicsville, VA 23111	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Acute Test Results

Species-Test Method	48-h LC50	95% C.L.	$T.U._{Ac}$	NOAEC
C. dubia EPA 2002.0	>100	N/A	1.00	100
P. promelas EPA 2000.0	>100	N/A	1.00	100

*Note: Details regarding test conduct and data analysis provided in attached bench sheets and printouts as applicable.

Acute Test Biological Summary Data

Species-Method	Endpoint	Sample Concentration (%)					
		Control	6.25	12.5	25	50	100
C. dubia EPA 2002.0	Survival (%):	100	100	100	100	100	100
P. promelas EPA 2000.0	Survival (%):	100	100	100	100	100	100

Test Information Species-Method	Start Date/Time End Date/Time	Organism Source	Hatch/Harvest Date/Time	Acclimation Temp.	Acclimation Water	Test Aerated?
C. dubia EPA 2002.0	7/22/09 1415 7/24/09 1415	CBI Stock	7/21/09 1630 7/22/09 0900	25° C	Mod. Hard Syn. FW	No
P. promelas EPA 2000.0	7/22/09 1420 7/24/09 1420	CBI Stock	7/18/09 1500 7/19/09 1100	25° C	Mod. Hard Syn. FW	No

Sample/Dilution Water Data	Acute Test	
Water Quality Parameter (Units)	Sample	Dilution* Water
Arrival Temperature (°C)	6	N/A
Use Temperature (°C)	25	25
Conductivity (µS/cm)	301	298
pH (S.U.)	7.13	7.73
Dissolved Oxygen (mg/l)	6.5	8.2
Total Hardness (mg/l as $CaCO_3$)	68	98
Alkalinity (mg/l as $CaCO_3$)	44	59
Total Residual Chlorine (mg/l)	<Q.L.	N/A
Ammonia (mg/l NH_3-N)	<1.0	N/A

*Dilution water = Moderately hard synthetic freshwater made with deionized water

Sample Aging/Use/Pretreatment

CBI Sample I.D.	Collection Date/Time	Date(s)/Time(s) 1st Used in Tests	Date(s)/Time(s) Used in Renewals	Sample Adjustments
PRIM0902-A	7/21/09 1006	7/22/09 1415, 1420	N/A	Aerated 2.5 min

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0902
Client Sample ID: Doswell Truck Stop Outfall 001
Permit No: VA0052906
Sample Period: 7/21/09 Wet Weather

Coastal Bioanalysts, Inc.

Acute Test Water Quality (Mean/Std. Dev.)												
Test:	*C. dubia* 2002.0						*P. promelas* 2000.0					
% Conc:	Cont.	6.25	12.5	25	50	100	Cont.	6.25	12.5	25	50	100
Temp.	25	25	25	25	25	25	25	25	25	25	25	25
(°C)	0	0	0	0	0	0	0	0	0	0	0	0
D.O.	8.0	7.9	7.7	7.5	7.3	7.0	7.7	7.6	7.3	7.1	6.8	6.2
(mg/l)	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.6	0.7	0.6	0.7	0.4
pH	8.00	7.95	7.91	7.82	7.69	7.41	7.75	7.69	7.63	7.56	7.42	7.18
(S.U.)	0.05	0.06	0.10	0.11	0.19	0.34	0.18	0.16	0.15	0.12	0.06	0.13

Acute Test QA/QC	Reference Toxicant: KCl Units: mg/l		Test Organism Source: CBI Stock Cultures		
Species-Method (Ref. Test Date)	Data Source	% Control Survival	48-h LC50	95% C.L./A.L. For LC50	RTT in Control?
C. dubia 2002.0	RTT	100	570	527-617	Yes
(7/6/09-7/8/09)	CC	100	562	487-636	
P. promelas 2000.0	RTT	100	915	841-988	Yes
(7/7/09-7/9/09)	CC	99	930	799-1060	

Note: RTT = Reference Toxicant Test, CC = Control Chart

The results of analysis contained within this report relate only to the sample as received in the laboratory. This report shall not be reproduced except in full without written approval from the laboratory.

APPROVED:

Peter F. De Lisle, Ph.D.
Technical Director

7/29/09
Date

GLOSSARY OF TERMS AND ABBREVIATIONS

A.L. (Acceptance Limits): The results of a given reference toxicant test are compared to the control chart mean value ± 2 standard deviations. These limits approximate the 95% probability limits for the "true" reference toxicant value.

C.L. (Confidence Limits): These are the probability limits, based on the data set and statistical model employed, that the "true value" lies within the limits specified. Typically limits are based on 95% or 99% probabilities.

Control chart: A cumulative summary chart of results from QC tests with reference toxicants. The results of a given reference toxicant test are compared to the control chart mean value and 95% Acceptance Limits (A.L.) (mean ± 2 standard deviations).

LC50: The concentration of sample or chemical, calculated from the data set using statistical models, causing a 50% reduction in test organism survival. The lower the LC50, the more toxic the chemical or sample. Units are same as test concentration units. Note: The LC50 value must always be associated with the duration of exposure. Thus 48-h LC50, 96-h LC50, etc. are calculated.

N/A: Not applicable. **N/D:** Not determined or measured.

NOAEC: No-observable-acute-effect-concentration. The highest concentration of sample or chemical in an acute test dilution series in which the test organisms exhibit no statistically significant reduction in the test end point (e.g. survival) compared to control organisms. Units are same as test concentration units.

Q.L.: Quantitation Limit. Level, concentration, or quantity of a target variable (analyte) that can be reported at a specified degree of confidence.

T.U.: Toxic units. Expresses the relative toxicity of an effluent in such a manner that the larger the toxic unit value the more toxic the effluent. $T.U._{Ac} = 100/LC50$. $T.U._{Chr} = 100/NOEC$. A dimensionless unit.

EPA Laboratory ID: VA01116

CERIODAPHNIA DUBIA STATIC ACUTE WET TEST (ACD) FORM ETF1051D

COASTAL BIOANALYSTS, INC
EFFECTIVE DATE: 2/1/09

% Effluent	I.D.	Day 0 Live	Day 1 Live	Day 2 Live	Final % Survival
Control	C-a	5	5	5	100
	C-b	5	5	5	
	C-c	5	5	5	
	C-d	5	5	5	
6.25	1-a	5	5	5	100
	1-b	5	5	5	
	1-c	5	5	5	
	1-d	5	5	5	
12.5	2-a	5	5	5	100
	2-b	5	5	5	
	2-c	5	5	5	
	2-d	5	5	5	
25	3-a	5	5	5	100
	3-b	5	5	5	
	3-c	5	5	5	
	3-d	5	5	5	
50	4-a	5	5	5	100
	4-b	5	5	5	
	4-c	5	5	5	
	4-d	5	5	5	
100	5-a	5	5	5	100
	5-b	5	5	5	
	5-c	5	5	5	
	5-d	5	5	5	
	Initials:	GB	PB	GB	
	Count Time:	1415	0955	1415	*Test end time

NOTES:

Parameter	Treatment I.D.	Day 0	Day 1	Day 2
Temp. (°C)	C	25	25	25
	1	25	25	25
	2	25	25	25
	3	25	25	25
	4	25	25	25
	5	25	25	25
pH (S.U.)	C	7.45	8.04	8.02
	1	7.88	8.00	7.98
	2	7.80	7.99	7.96
	3	7.70	7.85	7.91
	4	7.48	7.76	7.83
	5	7.03	7.55	7.66
D.O. (mg/l)	C	8.2	8.0	7.4
	1	8.2	7.6	7.8
	2	8.1	7.5	7.6
	3	7.8	7.3	7.5
	4	7.6	7.1	7.3
	5	6.6	7.1	7.2
Conduct. (uS/cm)	C	303		300
	1	304		
	2	303		
	3	308		
	4	302		
	5	301		299
Replicate Meas.:		S	S	C
Initials:		GB	PB	GB
TRC (mg/l) in highest conc. at end of test:				NA

Species: *Ceriodaphnia dubia*

Source: CBI stock cultures ✓

Other:

Brood Release: Date/time start: 2/22/09 1430

Date /time end: 2/22/09 0900

Acclimation: Water: Mod. hard syn. FW ✓

Other

Temperature (°C): 25

Feeding: Prior to test: YCT/*Selenastrum*
During test: Not Fed

Illumination: 16L:8D 10-20 uE/m²/s

Test chamber size: ✓ 30 ml

Solution volume: ✓ 15 ml _____ ml

Number of replicates/treatment: 4

Initial number of daphnids/replicate: 5

Template number: 9

Set up: Date (Day 0): 2/22/09

Time water added: 1400

Time daphnids added: 1415

Set up by (Initials): GB

Peer Rev. by: GDI PB Date: 2/24/09

TEST I.D. PTM0902 ACD

PIMEPHALES PROMELAS STATIC ACUTE WET TEST
NOAEC-TYPE TEST (4 REPLICATES) (APP-4REP) FORM ETF1043E

COASTAL BIOANALYSTS, INC
EFFECTIVE DATE: 2/1/09

% Effluent	I.D.	Day 0 Live	Day 1 Live	Day 2 Live	Final % Survival
Control	C-a	5	5	5	100
	C-b	5	5	5	
	C-c	5	5	5	
	C-d	5	5	5	
6.25	1-a	5	5	5	100
	1-b	5	5	5	
	1-c	5	5	5	
	1-d	5	5	5	
12.5	2-a	5	5	5	100
	2-b	5	5	5	
	2-c	5	5	5	
	2-d	5	5	5	
25	3-a	5	5	5	100
	3-b	5	5	5	
	3-c	5	5	5	
	3-d	5	5	5	
50	4-a	5	5	5	100
	4-b	5	5	5	
	4-c	5	5	5	
	4-d	5	5	5	
100	5-a	5	5	5	100
	5-b	5	5	5	
	5-c	5	5	5	
	5-d	5	5	5	
	Initials:	CB	RB	CB	
	Count Time:	1401	0950	1428	Test End Time

NOTES:

① 6.9 @ 100

Parameter	Treatment I.D.	Day 0	Day 1	Day 2
Temp. (°C)	C	25	25	25
	1	25	25	25
	2	25	25	25
	3	25	25	25
	4	25	25	25
	5	25	25	25
pH (S.U.)	C	7.95	7.59	7.72
	1	7.88	7.59	7.60
	2	7.80	7.55	7.54
	3	7.70	7.49	7.50
	4	7.48	7.37	7.42
	5	7.03	7.28	7.22
D.O. (mg/l)	C	8.2	7.7	7.3
	1	8.2	7.5	7.1
	2	8.1	7.0	6.9
	3	7.8	6.8	6.6
	4	7.6	6.6	6.3
	5	6.60	6.2	5.8
Conduct. (uS/cm)	C	303		304
	1	304		
	2	303		
	3	303		
	4	302		
	5	301		309
Replicate Measured:		B	A	D
Initials:		CB	RB	CB
TRC (mg/l) in highest conc. at end of test:				NA

Species: *Pimephales promelas*

Source: CBI stock cultures ✓

Other: _____

Hatch: Date/time start: 2/18/09 1520

Date /time end: 2/19/09 1104

Acclimation: Water: Mod. hard syn. FW ✓

Other _____

Temperature (°C): 25

Feeding: Prior to test: *Artemia ad libitum*
During test: Not Fed

Illumination: 16L:8D 10-20 uE/m²/s

Test chamber size: ✓ 400 ml _____ ml

Solution volume: ✓ 200 ml _____ ml

Initial number of fish/replicate: 5

Set up: Date (Day 0): 2/22/09

Time water added: 1400

Time fish added: 1420

Set up by (initials): CB

Peer Rev. by: CB/RB Date 2/24/09

TEST I.D. PIMS902 -APP-4REP

EFFLUENT SAMPLE & DILUTION WATER CHARACTERISTICS
FRESHWATER TESTS FORM ETF2031D

COASTAL BIOANALYSTS, INC
EFFECTIVE DATE: 2/1/09

INITIAL SAMPLE CHARACTERIZATION[1]					NOTES:
Sample Bottle[2]	A-1				①Chlorine positive interference corrected w/ KI & $NaAsO_2$
Tot. Res. Chlorine (mg/l)	0.02①				
Hardness (mg/l $CaCO_3$)	108				
Alkalinity (mg/l $CaCO_3$)	44				
NH_3-N (mg/l)	<1.0				
Color/Appearance[3]	CLSSR				
Obvious Odor?	ND				
Date/Time	2/22/1040				
Initials	UP				

SAMPLE PREPARATION MEASUREMENTS (100% concentration)									
Sample Bottle[2]	A-1								
Prep Temperature (°C)	25								
Conductivity (uS/cm)[4]	301								
D.O. (mg/l) After Warming	2.3								
Aeration Time (min)	2.5								
Adjusted D.O.	4.5								
Final pH (S.U.)	7.13								
Tot. Res. Chlorine (mg/l)[5]	N.D								
Sample Filtered (60 um)?	NO								
Date/Time	2/22 1355								
Initials	LM								

DILUTION WATER CHARACTERISTICS									
Vat Number	1								
Temperature (°C)	25								
Conductivity (uS/cm)	298								
D.O. (mg/l)	8.2								
pH (S.U.)	7.73								
Hardness (mg/l $CaCO_3$)	98								
Alkalinity (mg/l $CaCO_3$)	54								
Date/Time	2/22 1458								
Initials	UP								

[1]Q.L. = Quantification Limit, N.D. = Not Determined/Measured, NA = Not Applicable
[2]Ninth character of Laboratory Sample I.D. (on chain of custody form) and bottle number in collection series (e.g. "A-2" is sample bottle number 2 from "A" collection). Together with project ID below constitutes entire sample bottle ID.
[3]C-Clear, O-Opaque, T-Turbid, S-Solids (Sl-Slight, M-Moderate, H-Heavy), Y-Yellow, B-Brown, Bl-Black, G-Green
[4]Conductivity measured on first use of sample only
[5]Total residual chlorine measured after sample prep only if present in initial sample characterization

Peer Rev by PB Date 2/27/09 PROJECT I.D. PREM0902
(First 8 characters of Laboratory Sample ID)

Coastal Bioanalysts
6400 Enterprise Court, Gloucester, VA 23061
PH: 804-694-8285, FAX: 804-695-1129
www.coastalbio.com

SAMPLE INFORMATION/CHAIN-OF-CUSTODY (FORM ETF2011E Rev. 4/15/09)

Lab Sample ID (Lab Use Only): P K I m a 9 0 2 - A
A A A A Y Y N N (Project ID) — A (Spl)

WET

FACILITY INFORMATION

CLIENT/FACILITY NAME: Daswell Truck Stop	CONTACT & PHONE #: Adam Meurer 804.353.6333
NPDES PERMIT NO: VA0052906	OUTFALL # OR LOCATION: 901
SAMPLE CHLORINATED? NO	SAMPLE DECHLORINATED? NO
IF CHLORINE PRESENT UPON ARRIVAL AT LAB, DOES PERMIT SPECIFY DECHLORINATION OF SAMPLES?	
TESTS REQUESTED: SPECIES OR EPA METH #: C. dubia	ACUTE ☑ CHRONIC ☐
SPECIES OR EPA METH #: P. promelas	ACUTE ☑ CHRONIC ☐
OTHER TESTS:	

A SPECIFIC DILUTION SERIES MAY BE REQUIRED IN THE PERMIT. A DEFAULT SERIES OF 100, 50, 25, 12.5 AND 6.3%, OR CONCENTRATIONS USED IN PRIOR TESTING, WILL BE USED UNLESS INDICATED OTHERWISE. IF IN DOUBT PLEASE ATTACH A COPY OF APPLICABLE PERMIT PAGES.

GRAB SAMPLE INFORMATION

SAMPLE DATE	SAMPLE TIME	SAMPLE VOLUME
7/21/09	10:00 am	1 gallon

COMPOSITE SAMPLE INFORMATION

SAMPLE START DATE & TIME	SAMPLE END DATE & TIME	AUTOSAMPLER TEMP. (°C)

TIME OR FLOW PROPORTIONAL COMPOSITE INFORMATION: NUMBER SUBSAMPLES_____ VOL (ml) SUBSAMPLES_____ TIME INCREMENT_____
SET VOLUME SUBSAMPLE_____ SET VOLUME FLOW_____ TOTAL VOLUME_____

FOR VARIABLE VOLUME SUBSAMPLES BASED ON FLOW (COMPOSITING "BY HAND") ATTACH SAMPLE AND FLOW INFORMATION ON SEPARATE SHEET

FIELD MEASUREMENTS

DISCHARGE TEMP (°C)	DISCHARGE pH (S.U.)	SAMPLE TEMP (°C)	SAMPLE TRC (mg/l)	DATE/TIME (e.g. 02/23/00 1835)	INITIALS
25.6 °C	7.46	25.6 °C	0.0	7/21/09 10:14 am	AMM

MEASUREMENTS MUST BE TAKEN WITHIN 15 MINUTES OF SAMPLE OR LAST SUBSAMPLE COLLECTION.

COMMENTS:

Adam M. Meurer — (PRINTED NAME/AFFILIATION SAMPLER/ANALYST) — (SIGNATURE) — 7/21/09 (DATE)

RELINQUISHED BY	DATE	TIME	RECEIVED BY
	7/22/09	1031	

SHIPPING METHOD: UPS____ FEDEX ✓ HAND DELIVERY____ OTHER_____

CONDITION ON ARRIVAL: ACCEPTABLE___ OTHER_____

SAMPLE ARRIVAL TEMP: (°C) 6 ARRIVED ON ICE? YES ✓ NO____

NOTE: It is the responsibility of the sampler to insure that samples are properly collected, preserved (>0-6° C) and shipped. Sample hold time is 36 h. Additional costs may be incurred by improper preservation, shipping or receipt of samples after 3 p.m. or on weekends and holidays.

Client: Primary Laboratories, Inc.
Project ID: PRIM0801
Client Sample ID: Doswell All American Truck Plaza Outfall 001
Permit No: VA0052906
Sample Period: 2/28/08

Coastal Bioanalysts, Inc.

Report of Analysis: Whole Effluent Toxicity (DRY)

Submitted To:	Prepared By:
Mr. David Stoneman Primary Laboratories, Inc. 7423 Lee Davis Road Mechanicsville, VA 23111	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Acute Test Results

Species-Test Method	48-h LC50	95% C.L.	$T.U._{As}$	NOAEC
C. dubia EPA 2002.0	>100	N/A	1.00	100
P. promelas EPA 2000.0	>100	N/A	1.00	100

Note: Details regarding test conduct and data analysis provided in attached bench sheets and printouts as applicable.

Acute Test Biological Summary Data

Species-Method	Endpoint	Sample Concentration (%)					
		Control	6.5	13	25	50	100
C. dubia EPA 2002.0	Survival (%):	100	100	100	100	100	100
P. promelas EPA 2000.0	Survival (%):	100	100	100	100	100	100

Test Information Species-Method	Start Date/Time End Date/Time	Organism Source	Hatch/Harvest Date/Time	Acclimation Temp.	Acclimation Water	Test Aerated?
C. dubia EPA 2002.0	2/29/08 1455 3/2/08 1500	CBI Stock	2/28/08 1605 2/29/08 0930	25° C	Mod. Hard Syn. FW	No
P. promelas EPA 2000.0	2/29/08 1440 3/2/08 1450	CBI Stock	2/20/08 1100 2/21/08 1100	25° C	Mod. Hard Syn. FW	No

Sample/Dilution Water Data	Acute Test	
Water Quality Parameter (Units)	Sample	Dilution Water
Arrival Temperature (°C)	3	N/A
Use Temperature (°C)	25	25
Conductivity (µS/cm)	556	297
pH (S.U.)	7.39	8.02
Dissolved Oxygen (mg/l)	8.2	8.2
Total Hardness (mg/l as $CaCO_3$)	66	86
Alkalinity (mg/l as $CaCO_3$)	13	59
Total Residual Chlorine (mg/l)	<Q.L.	N/A
Ammonia (mg/l NH_3-N)	<1.0	N/A

Dilution water = Moderately hard synthetic freshwater made with ASTM Type I deionized water

Sample Aging/Use/Pretreatment

CBI Sample I.D.	Collection Date/Time	Date(s)/Time(s) 1st Used in Tests	Date(s)/Time(s) Used in Renewals	Sample Adjustments
PRIM0801-A	2/28/08 1549	2/29/08 1440, 1455	N/A	Aerated 3 min

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0801
Client Sample ID: Doswell All American Truck Plaza Outfall 001
Permit No: VA0052906
Sample Period: 2/28/08

Coastal Bioanalysts, Inc.

Acute Test Water Quality (Mean/Std. Dev.)												
Test:	*C. dubia* 2002.0						*P. promelas* 2000.0					
% Conc:	Cont.	6.5	13	25	50	100	Cont.	6.5	13	25	50	100
Temp. (°C)	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0
D.O. (mg/l)	8.1 0.1	8.2 0.1	8.1 0.1	8.1 0.1	8.1 0.2	8.0 0.2	8.1 0.1	8.1 0.1	8.0 0.2	8.0 0.2	7.9 0.2	7.9 0.2
pH (S.U.)	8.09 0.05	8.06 0.08	8.05 0.08	7.99 0.08	7.84 0.12	7.60 0.19	7.89 0.18	7.87 0.15	7.81 0.17	7.74 0.16	7.65 0.09	7.43 0.02

Acute Test QA/QC — Reference Toxicant: KCl Units: mg/l — Test Organism Source: CBI Stock Cultures					
Species-Method (Ref. Test Date)	Data Source	% Control Survival	48-h LC50	95% C.L./A.L. For LC50	RTT in Control?
C. dubia 2002.0	RTT	100	506	392-560	Yes
(2/20/08-2/22/08)	CC	100	576	501-652	
P. promelas 2000.0	RTT	100	847	777-925	Yes
(2/19/08-2/21/08)	CC	100	911	828-995	

Note: RTT = Reference Toxicant Test, CC = Control Chart

The results of analysis contained within this report relate only to the sample as received in the laboratory. This report shall not be reproduced except in full without written approval from the laboratory.

APPROVED:

Peter F. De Lisle, Ph.D.
Technical Director

3/7/08
Date

GLOSSARY OF TERMS AND ABBREVIATIONS

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C.L. (Confidence Limits): These are the probability limits, based on the data set and statistical model employed, that the "true value" lies within the limits specified. Typically limits are based on 95% or 99% probabilities.

Control chart: A cumulative summary chart of results from QC tests with reference toxicants. The results of a given reference toxicant test are compared to the control chart mean value and 95% Acceptance Limits (A.L.) (mean ± 2 standard deviations).

LC50: The concentration of sample or chemical, calculated from the data set using statistical models, causing a 50% reduction in test organism survival. The lower the LC50, the more toxic the chemical or sample. Units are same as test concentration units. Note: The LC50 value must always be associated with the duration of exposure. Thus 48-h LC50, 96-h LC50, etc. are calculated.

N/A: Not applicable. **N/D:** Not determined or measured.

NOAEC: No-observable-acute-effect-concentration. The highest concentration of sample or chemical in an acute test dilution series in which the test organisms exhibit no statistically significant reduction in the test end point (e.g. survival) compared to control organisms. Units are same as test concentration units.

Q.L.: Quantitation Limit. Level, concentration, or quantity of a target variable (analyte) that can be reported at a specified degree of confidence.

T.U.: Toxic units. Expresses the relative toxicity of an effluent in such a manner that the larger the toxic unit value the more toxic the effluent. $T.U._{Ac} = 100/LC50$. $T.U._{Chr} = 100/NOEC$. A dimensionless unit.

EPA Laboratory ID: VA01116

ECS MID-ATLANTIC, LLC
Geotechnical • Construction Materials • Environmental • Facilities

August 8, 2008

Ms. Tamira Cohen
Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060

ECS Project No.: 03-8725

RE: Annual Report Doswell All American Travel Plaza (DAATP)
Outfall 901 – Copper, Zinc, and Biological Monitoring Results
Doswell, Virginia
VPDES Permit Number VA0052906 (reissued February 19, 2006)

Dear Ms. Cohen:

ECS Mid-Atlantic, LLC is pleased to submit this Annual Report for the above referenced site. The information contained herein serves to comply with the requirements of Part I.E.3 of the established VPDES permit. More specifically, pollutant specific and biological monitoring data collected from Outfall 901 is required to be submitted as well as an analysis of modifications needed to update the Stormwater Pollution Prevention Plan (SWPPP) or Best Management Practices (BMPs) utilized at the site.

Pursuant to Part I.A.2 of the above referenced VPDES permit, Outfall 901 is sampled every quarter following a measurable rain event. No discharge events occurred during the quarterly monitoring periods from July 2007 through March 2008, therefore resulting in a lack of data for those quarters. The data presented below in Table 1 represents the most recent monitoring data collected at the outfall. The monitored parameters were below the allowable limits specified in Part I.2.a of the permit. These data, and the associated laboratory analytical results, have also been provided to the Department as part of the routine Discharge Monitoring Reports (DMRs) submitted by DAATP.

Table 1 – Pollutant specific monitoring data collected from Outfall 901; May 2007 - July 2008

Date	Flow	pH	Petroleum Hydrocarbons	Copper, Dissolved	Zinc Dissolved
July 2008	0.66 MGD	7.02 SU	<1.0 mg/L	44 µg/L	20 µg/L
April 2008	0.053 MGD	6.64 SU	<1.0 mg/L	52 µg/L	42 µg/L
May 2007	0.017 MGD	6.76 SU	<1.0 mg/L	3.9 µg/L	60 µg/L

In addition to pollutant specific monitoring, quarterly biological monitoring events are required to ascertain the potential of the permitted discharge to adversely affect the aquatic environment. One (1) sample is collected for acute toxicity testing from Outfall

001 Dry Weather and 901 Wet Weather per quarter. To date, two (2) quarters have been sampled (January through March 2008 and April through June 2008) resulting in a total of four (4) acute toxicity tests. Sample results from the four (4) acute toxicity tests are provided as Attachments 1 (1st Quarter) and 2 (2nd Quarter). As can be seen from the results, the four (4) tests resulted in a NOAEC of 100, which indicates no adverse effects were observed in either the *C. dubia* or *P. promelas* populations. In fact, of the replicates, dilutions, and tests run, only one (1) *P. promelas* individual did not survive the 100% effluent concentration collected from the Wet Weather Outfall 901 on July 7, 2008. This extremely low mortality results in a statistically verified NOAEC of 100, indicating the effluent does not appear to be harmful to the aquatic environment. It follows then that the toxicity tests report a 48-h LC_{50} greater than 100. The LC_{50} is defined as the sample concentration that will cause a 50% reduction in survival of the test organism. Thus, since no adverse effects were observed in the 100% sample concentration, the LC_{50} could not be determined as the effluent was shown to not cause observable acute adverse effects to these test organisms.

Based on the data collected at Outfall 901, no exceedances of the pollutant specific concentration limits specified in the permit have been detected within the most recent monitoring year. Thus, neither revisions to the SWPPP nor modifications to site BMPs are necessary at this time. The BMPs employed at the study site therefore appear to be adequately treating the stormwater discharge from the facility.

We are pleased to have this opportunity to work with you on the project. Should you have any questions or comments, please feel free to contact us at (804) 353-6333.

Respectfully submitted,

ECS MID-ATLANTIC, LLC

Adam M. Meurer, M.S.
Senior Environmental Scientist

Marlee A. Parker
Environmental Department Manager

W. Lloyd Ward, P.E.
Branch Manager, Vice President

Cc: Gary Mattson-DAATP
Allison Dunaway, DEQ-PRO

ATTACHMENT 1

1st QUARTER TOXICITY TEST RESULTS

Client: Primary Laboratories, Inc.
Project ID: PRIM0801
Client Sample ID: Doswell All American Truck Plaza Outfall 001
Permit No: VA0052906
Sample Period: 2/28/08

Coastal Bioanalysts, Inc.

Report of Analysis: Whole Effluent Toxicity (DRAFT)

Submitted To:	Prepared By:
Mr. David Stoneman Primary Laboratories, Inc. 7423 Lee Davis Road Mechanicsville, VA 23111	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Acute Test Results

Species-Test Method	48-h LC50	95% C.L.	$T.U._{Ac}$	NOAEC
C. dubia EPA 2002.0	>100	N/A	1.00	100
P. promelas EPA 2000.0	>100	N/A	1.00	100

*Note: Details regarding test conduct and data analysis provided in attached bench sheets and printouts as applicable.

Acute Test Biological Summary Data

Species-Method	Endpoint	Sample Concentration (%)					
		Control	6.5	13	25	50	100
C. dubia EPA 2002.0	Survival (%):	100	100	100	100	100	100
P. promelas EPA 2000.0	Survival (%):	100	100	100	100	100	100

Test Information Species-Method	Start Date/Time End Date/Time	Organism Source	Hatch/Harvest Date/Time	Acclimation Temp.	Acclimation Water	Test Aerated?
C. dubia EPA 2002.0	2/29/08 1455 3/2/08 1500	CBI Stock	2/28/08 1605 2/29/08 0930	25° C	Mod. Hard Syn. FW	No
P. promelas EPA 2000.0	2/29/08 1440 3/2/08 1450	CBI Stock	2/20/08 1100 2/21/08 1100	25° C	Mod. Hard Syn. FW	No

Sample/Dilution Water Data	Acute Test	
Water Quality Parameter (Units)	Sample	Dilution Water
Arrival Temperature (°C)	3	N/A
Use Temperature (°C)	25	25
Conductivity (µS/cm)	556	297
pH (S.U.)	7.39	8.02
Dissolved Oxygen (mg/l)	8.2	8.2
Total Hardness (mg/l as $CaCO_3$)	66	86
Alkalinity (mg/l as $CaCO_3$)	13	59
Total Residual Chlorine (mg/l)	<Q.L.	N/A
Ammonia (mg/l NH_3-N)	<1.0	N/A

*Dilution water = Moderately hard synthetic freshwater made with ASTM Type 1 deionized water

Sample Aging/Use/Pretreatment

CBI Sample I.D.	Collection Date/Time	Date(s)/Time(s) 1st Used in Tests	Date(s)/Time(s) Used in Renewals	Sample Adjustments
PRIM0801-A	2/28/08 1549	2/29/08 1440, 1455	N/A	Aerated 3 min

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0801
Client Sample ID: Doswell All American Truck Plaza Outfall 001
Permit No: VA0052906
Sample Period: 2/28/08

Coastal Bioanalysts, Inc.

Acute Test Water Quality (Mean/Std. Dev.)

Test:	*C. dubia* 2002.0						*P. promelas* 2000.0					
% Conc:	Cont.	6.5	13	25	50	100	Cont.	6.5	13	25	50	100
Temp. (°C)	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0
D.O. (mg/l)	8.1 0.1	8.2 0.1	8.1 0.1	8.1 0.1	8.1 0.2	8.0 0.2	8.1 0.1	8.1 0.1	8.0 0.2	8.0 0.2	7.9 0.2	7.9 0.2
pH (S.U.)	8.09 0.05	8.06 0.08	8.05 0.08	7.99 0.08	7.84 0.12	7.60 0.19	7.89 0.18	7.87 0.15	7.81 0.17	7.74 0.16	7.65 0.09	7.43 0.02

Acute Test QA/QC - Reference Toxicant: KCl Units: mg/l Test Organism Source: CBI Stock Cultures

Species-Method (Ref. Test Date)	Data Source	% Control Survival	48-h LC50	95% C.L./A.L. For LC50	RTT in Control?
C. dubia 2002.0	RTT	100	506	392-560	Yes
(2/20/08-2/22/08)	CC	100	576	501-652	
P. promelas 2000.0	RTT	100	847	777-925	Yes
(2/19/08-2/21/08)	CC	100	911	828-995	

Note: RTT = Reference Toxicant Test, CC = Control Chart

The results of analysis contained within this report relate only to the sample as received in the laboratory. This report shall not be reproduced except in full without written approval from the laboratory.

APPROVED:

Peter F. De Lisle, Ph.D.
Technical Director

3/7/08
Date

GLOSSARY OF TERMS AND ABBREVIATIONS

A.L. (Acceptance Limits): The results of a given reference toxicant test are compared to the control chart mean value ± 2 standard deviations. These limits approximate the 95% probability limits for the "true" reference toxicant value.

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Control chart: A cumulative summary chart of results from QC tests with reference toxicants. The results of a given reference toxicant test are compared to the control chart mean value and 95% Acceptance Limits (A.L.) (mean ± 2 standard deviations).

LC50: The concentration of sample or chemical, calculated from the data set using statistical models, causing a 50% reduction in test organism survival. The lower the LC50, the more toxic the chemical or sample. Units are same as test concentration units. Note: The LC50 value must always be associated with the duration of exposure. Thus 48-h LC50, 96-h LC50, etc. are calculated.

N/A: Not applicable. N/D: Not determined or measured.

NOAEC: No-observable-acute-effect-concentration. The highest concentration of sample or chemical in an acute test dilution series in which the test organisms exhibit no statistically significant reduction in the test end point (e.g. survival) compared to control organisms. Units are same as test concentration units.

Q.L.: Quantitation Limit. Level, concentration, or quantity of a target variable (analyte) that can be reported at a specified degree of confidence.

T.U.: Toxic units. Expresses the relative toxicity of an effluent in such a manner that the larger the toxic unit value the more toxic the effluent. $T.U._{Ac} = 100/LC50$. $T.U._{Ch} = 100/NOEC$. A dimensionless unit.

Client: Primary Laboratories, Inc.
Project ID: PRIM0802
Client Sample ID: Doswell All American Truck Plaza Outfall 001
Permit No: VA0052906
Sample Period: 4/22/08

001

D804244-1

Coastal Bioanalysts, Inc.

Report of Analysis: Whole Effluent Toxicity (WET)

Submitted To:	Prepared By:
Mr. David Stoneman Primary Laboratories, Inc. 7423 Lee Davis Road Mechanicsville, VA 23111	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Acute Test Results

Species-Test Method	48-h LC50	95% C.L.	$T.U._{Ac}$	NOAEC
C. dubia EPA 2002.0	>100	N/A	1.00	100
P. promelas EPA 2000.0	>100	N/A	1.00	100

Note: Details regarding test conduct and data analysis provided in attached bench sheets and printouts as applicable.

Acute Test Biological Summary Data

Species-Method	Endpoint	Sample Concentration (%)					
		Control	6.5	13	25	50	100
C. dubia EPA 2002.0	Survival (%):	100	100	100	100	100	100
P. promelas EPA 2000.0	Survival (%):	100	100	100	100	100	100

Test Information Species-Method	Start Date/Time End Date/Time	Organism Source	Hatch/Harvest Date/Time	Acclimation Temp.	Acclimation Water	Test Aerated?
C. dubia EPA 2002.0	4/23/08 1400 4/25/08 1425	CBI Stock	4/22/08 1635 4/23/08 0925	25° C	Mod. Hard Syn. FW	No
P. promelas EPA 2000.0	4/23/08 1410 4/25/08 1435	CBI Stock	4/13/08 1200 4/14/08 1200	25° C	Mod. Hard Syn. FW	No

Sample/Dilution Water Data	Acute Test	
Water Quality Parameter (Units)	Sample	Dilution Water
Arrival Temperature (°C)	2	N/A
Use Temperature (°C)	25	25
Conductivity (µS/cm)	150	287
pH (S.U.)	6.77	7.75
Dissolved Oxygen (mg/l)	8.2	8.2
Total Hardness (mg/l as $CaCO_3$)	66	100
Alkalinity (mg/l as $CaCO_3$)	23	59
Total Residual Chlorine (mg/l)	<Q.L.	N/A
Ammonia (mg/l NH_3-N)	<1.0	N/A

Dilution water = Moderately hard synthetic freshwater made with ASTM Type I deionized water

Sample Aging/Use/Pretreatment

CBI Sample I.D.	Collection Date/Time	Date(s)/Time(s) 1st Used in Tests	Date(s)/Time(s) Used in Renewals	Sample Adjustments
PRIM0802-A	4/22/08 1155	4/23/08 1400, 1410	N/A	Aerated 2 min

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0802
Client Sample ID: Doswell All American Truck Plaza Outfall 001
Permit No: VA0052906
Sample Period: 4/22/08

CBI
Coastal Bioanalysts, Inc.

Acute Test Water Quality (Mean/Std. Dev.)

Test:	*C. dubia* 2002.0						*P. promelas* 2000.0					
% Conc:	Cont.	6.5	13	25	50	100	Cont.	6.5	13	25	50	100
Temp. (°C)	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0
D.O. (mg/l)	8.1 0.1	8.1 0.1	8.1 0.1	8.1 0.1	8.0 0.2	8.0 0.2	8.1 0.1	8.1 0.1	8.1 0.1	8.1 0.1	8.0 0.2	8.0 0.2
pH (S.U.)	7.84 0.06	7.85 0.05	7.83 0.03	7.75 0.11	7.64 0.11	6.88 0.33	7.74 0.10	7.73 0.10	7.69 0.10	7.60 0.05	7.52 0.04	6.75 0.22

Acute Test QA/QC: Reference Toxicant: KCl Units: mg/l Test Organism Source: CBI Stock Cultures

Species-Method (Ref. Test Date)	Data Source	% Control Survival	48-h LC50	95% C.L./A.L. For LC50	RTT in Control?
C. dubia 2002.0 (4/18/08-4/20/08)	RTT	100	560	517-607	Yes
	CC	100	575	494-656	
P. promelas 2000.0 (4/18/08-4/20/08)	RTT	100	944	885-1006	Yes
	CC	100	908	820-997	

Note: RTT = Reference Toxicant Test, CC = Control Chart

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APPROVED:

Peter F. De Lisle, Ph.D.
Technical Director

9/25/08
Date

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Control chart: A cumulative summary chart of results from QC tests with reference toxicants. The results of a given reference toxicant test are compared to the control chart mean value and 95% Acceptance Limits (A.L.) (mean ± 2 standard deviations).

LC50: The concentration of sample or chemical, calculated from the data set using statistical models, causing a 50% reduction in test organism survival. The lower the LC50, the more toxic the chemical or sample. Units are same as test concentration units. Note: The LC50 value must always be associated with the duration of exposure. Thus 48-h LC50, 96-h LC50, etc. are calculated.

N/A: Not applicable. N/D: Not determined or measured.

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Q.L.: Quantitation Limit. Level, concentration, or quantity of a target variable (analyte) that can be reported at a specified degree of confidence.

T.U.: Toxic units. Expresses the relative toxicity of an effluent in such a manner that the larger the toxic unit value the more toxic the effluent. $T.U._{Ac} = 100/LC50$. $T.U._{Ch} = 100/NOEC$. A dimensionless unit.

EPA Laboratory ID: VA01116

ATTACHMENT 2

2nd QUARTER TOXICITY TEST RESULTS

0807036

Client: Primary Laboratories, Inc.
Project ID: PRIM0803
Client Sample ID: Doswell All American Truck Plaza Outfall 001
Permit No: VA0052906
Sample Period: 6/26/08 Dry Weather

CBI
Coastal Bioanalysts, Inc.

Report of Analysis: Whole Effluent Toxicity (DRY)

Submitted To:	Prepared By:
Mr. David Stoneman Primary Laboratories, Inc. 7423 Lee Davis Road Mechanicsville, VA 23111	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Acute Test Results*				
Species-Test Method	48-h LC50	95% C.L.	$T.U._{Ac}$	NOAEC
C. dubia EPA 2002.0	>100	N/A	1.00	100
P. promelas EPA 2000.0	>100	N/A	1.00	100

*Note: Details regarding test conduct and data analysis provided in attached bench sheets and printouts as applicable.

Acute Test Biological Summary Data		Sample Concentration (%)					
Species-Method	Endpoint	Control	6.5	13	25	50	100
C. dubia EPA 2002.0	Survival (%):	100	100	100	100	100	100
P. promelas EPA 2000.0	Survival (%):	100	100	100	100	100	100

Test Information	Start Date/Time	Organism	Hatch/Harvest	Acclimation	Acclimation	Test
Species-Method	End Date/Time	Source	Date/Time	Temp.	Water	Aerated?
C. dubia	6/27/08 1500	CBI	6/26/08 1620		Mod. Hard	
EPA 2002.0	6/29/08 1500	Stock	6/27/08 0925	25° C	Syn. FW	No
P. promelas	6/27/08 1510	CBI	6/19/08 1000		Mod. Hard	
EPA 2000.0	6/29/08 1510	Stock	6/20/08 1000	25° C	Syn. FW	Yes

0

Sample/Dilution Water Data	Acute Test	
Water Quality Parameter (Units)	Sample	Dilution* Water
Arrival Temperature (°C)	1	N/A
Use Temperature (°C)	26	26
Conductivity (µS/cm)	241	298
pH (S.U.)	7.22	7.70
Dissolved Oxygen (mg/l)	8.3	8.2
Total Hardness (mg/l as $CaCO_3$)	68	100
Alkalinity (mg/l as $CaCO_3$)	28	58
Total Residual Chlorine (mg/l)	<Q.L.	N/A
Ammonia (mg/l NH_3-N)	<1.0	N/A

*Dilution water = Moderately hard synthetic freshwater made with ASTM Type I deionized water

Sample Aging/Use/Pretreatment				
CBI Sample I.D.	Collection Date/Time	Date(s)/Time(s) 1st Used in Tests	Date(s)/Time(s) Used in Renewals	Sample Adjustments
PRIM0803-A	6/26/08 1330	6/27/08 1500, 1510	N/A	Aerated 0.5 min

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0803
Client Sample ID: Doswell All American Truck Plaza Outfall 001
Permit No: VA0052906
Sample Period: 6/26/08 Dry Weather

CBI
Coastal Bioanalysts, Inc.

Acute Test Water Quality (Mean/Std. Dev.)												
Test:	*C. dubia* 2002.0						*P. promelas* 2000.0					
% Conc:	Cont.	6.5	13	25	50	100	Cont.	6.5	13	25	50	100
Temp.	25	25	25	25	25	25	25	25	25	25	25	25
(°C)	0.6	0.6	0.6	0.6	0.6	0.6	0	0	0	0	0	0
D.O.	7.9	7.8	7.8	7.8	7.7	7.7	7.9	7.7	7.3	7.3	7.0	6.7
(mg/l)	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.8	1.1	2.0	2.6
pH	7.72	7.70	7.67	7.62	7.53	7.40	7.75	7.73	7.66	7.60	7.48	7.32
(S.U.)	0.04	0.04	0.06	0.05	0.07	0.09	0.10	0.13	0.17	0.22	0.31	0.39

Acute Test QA/QC	Reference Toxicant: KCl Units: mg/l		Test Organism Source: CBI Stock Cultures		
Species-Method (Ref. Test Date)	Data Source	% Control Survival	48-h LC50	95% C.L./A.L. For LC50	RTT in Control?
C. dubia 2002.0	RTT	95	549	481-608	Yes
(6/24/08-6/26/08)	CC	100	570	519-622	
P. promelas 2000.0	RTT	100	1005	913-1107	Yes
(6/24/08-6/26/08)	CC	100	913	816-1011	

Note: RTT = Reference Toxicant Test, CC = Control Chart

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APPROVED:

Peter F. De Lisle, Ph.D.
Technical Director

7/2/08
Date

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EPA Laboratory ID: VA01116

CERIODAPHNIA DUBIA STATIC A[illegible]E WET TEST
(ACD) FORM ETF1051C

CO[illegible]TAL BIOANALYSTS, INC
EFFECTIVE DATE: 11/26/07

% Effluent	I.D.	Day 0 Live	Day 1 Live	Day 2 Live	Final % Survival
Control	C-a	5	5	5	100
	C-b	5	5	5	
	C-c	5	5	5	
	C-d	5	5	5	
6.5	1-a	5	5	5	100
	1-b	5	5	5	
	1-c	5	5	5	
	1-d	5	5	5	
13	2-a	5	5	5	100
	2-b	5	5	5	
	2-c	5	5	5	
	2-d	5	5	5	
25	3-a	5	5	5	100
	3-b	5	5	5	
	3-c	5	5	5	
	3-d	5	5	5	
50	4-a	5	5	5	100
	4-b	5	5	5	
	4-c	5	5	5	
	4-d	5	5	5	
100	5-a	5	5	5	100
	5-b	5	5	5	
	5-c	5	5	5	
	5-d	5	5	5	
	Initials:	PO	ST	[illegible]	
	Count Time:	1500	1100	1500	Test end time

NOTES:

Parameter	Treatment I.D.	Day 0	Day 1	Day 2
Temp. (°C)	C	25	25	25
	1	25	26	25
	2	25	26	25
	3	25	26	25
	4	25	26	25
	5	25	26	25
pH (S.U.)	C	7.76	7.73	7.68
	1	7.75	7.68	7.67
	2	7.73	7.62	7.66
	3	7.66	7.56	7.64
	4	7.53	7.46	7.60
	5	7.38	7.32	7.50
D.O. (mg/l)	C	8.2	7.8	7.8
	1	8.2	7.6	7.7
	2	8.2	7.7	7.6
	3	8.2	7.6	7.6
	4	8.2	7.4	7.5
	5	8.3	7.4	7.4
Conduct. (uS/cm)	C	301	[illegible]	303
	1	298	[illegible]	[illegible]
	2	294	[illegible]	[illegible]
	3	290	[illegible]	[illegible]
	4	272	[illegible]	[illegible]
	5	242	[illegible]	250
Replicate Meas.:		S	S	C
Initials:		PO	ST	[illegible]
TRC (mg/l) in highest conc. at end of test:				NA

Species: *Ceriodaphnia dubia*

Source: CBI stock cultures ✓

Other:

Brood Release: Date/time start: 6/26/06 1120

Date /time end: 6/27/06 0925

Acclimation: Water: Mod. hard syn. FW ✓

Other

Temperature (°C): 25

Feeding: Prior to test: YCT/*Selenastrum*
During test: Not Fed

Illumination: 16L:8D 10-20 uE/m²/s

Test chamber size: ✓ 30 ml

Solution volume: ✓ 15 ml _____ ml

Number of replicates/treatment: 4

Initial number of daphnids/replicate: 5

Randomization template number: 16

Set up: Date (Day 0): 6/27/06

Time water added: 1450

Time daphnids added: 1500

Set up by (initials): PO

TEST I.D. PRim 0803 ACD

PIMEPHALES PROMELAS STATIC ACUTE WET TEST
NOAEC-TYPE TEST (4 REPLICATES) (APP-4REP) FORM ETF1043D

COASTAL BIOANALYSTS, INC
EFFECTIVE DATE: 11/26/07

% Effluent	I.D.	Day 0 Live	Day 1 Live	Day 2 Live	Final % Survival
Control	C-a	5	5	5	100
	C-b	5	5	5	
	C-c	5	5	5	
	C-d	5	5	5	
6.5	1-a	5	5	5	100
	1-b	5	5	5	
	1-c	5	5	5	
	1-d	5	5	5	
13	2-a	5	5	5	100
	2-b	5	5	5	
	2-c	5	5	5	
	2-d	5	5	5	
25	3-a	5	5	5	100
	3-b	5	5	5	
	3-c	5	5	5	
	3-d	5	5	5	
50	4-a	5	5	5	100
	4-b	5	5	5	
	4-c	5	5	5	
	4-d	5	5	5	
100	5-a	5	5	5	100
	5-b	5	5	5	
	5-c	5	5	5	
	5-d	5	5	5	
	Initials:	PP	ST	kaja	
	Count Time:	1510	1030	1510	*Test End Time

NOTES:

*aeration began @ 1040

Parameter	Treatment I.D.	Day 0	Day 1	Day 2
Temp. (°C)	C	25	25	25
	1	25	25	25
	2	25	25	25
	3	25	25	25
	4	25	25	25
	5	25	25	25
pH (S.U.)	C	7.72	7.65	7.84
	1	7.75	7.59	7.84
	2	7.73	7.47	7.78
	3	7.66	7.36	7.78
	4	7.53	7.14	7.76
	5	7.38	6.91	7.68
D.O. (mg/l)	C	8.2	7.3	8.2
	1	8.2	7.0	8.0
	2	8.2	6.6	7.7
	3	8.2	5.6	8.0
	4	8.2	4.7	8.1
	5	8.3	3.7	8.1
Conduct. (uS/cm)	C	301		297
	1	298		
	2	294		
	3	290		
	4	272		
	5	242		258
Replicate Measured:		D	B	A
Initials:		PP	ST	QS
TRC (mg/l) in highest conc. at end of test:				NA

Species: *Pimephales promelas*

Source: CBI stock cultures ✓

Other: _____

Hatch: Date/time start: 6/19/08 1000

Date /time end: 6/20/08 1000

Acclimation: Water: Mod. hard syn. FW ✓

Other _____

Temperature (°C): 25

Feeding: Prior to test: *Artemia ad libitum*
During test: Not Fed

Illumination: 16L:8D 10-20 uE/m²/s

Test chamber size: ✓ 400 ml _____ ml

Solution volume: ✓ 200 ml _____ ml

Initial number of fish/replicate: 5

Randomization template number: 1,6,7,5

Set up: Date (Day 0): 6/27/08

Time water added: 1450

Time fish added: 1510

Set up by (initials): PP

TEST I.D. Pim 8D3 -APP-4REP

EFFLUENT SAMPLE & DILUTION WATER CHARACTERISTICS
FRESHWATER TESTS

COASTAL BIOANALYSTS, INC
FORM ETF2031B EFFECTIVE DATE: 10/17/02

INITIAL SAMPLE CHARACTERIZATION					NOTES:
Sample Bottle[2]	A-1				
Tot. Resid. Chlorine (mg/l)	<QL				
Hardness (mg/l $CaCO_3$)	68				
Alkalinity (mg/l $CaCO_3$)	28				
NH_3-N (mg/l)	<1.0				
Color/Appearance[3]	CY				
Obvious Odor?	NO				
Date/Time	6/27/1030				
Initials	CG				

SAMPLE PREPARATION MEASUREMENTS (100% concentration)								
Sample Bottle	A-1							
Prep Temperature (°C)	26							
Conductivity (uS/cm)[4]	24							
D.O. (mg/l) After Warming	8.8							
Aeration Time (min)	0.5							
Adjusted D.O.	8.3							
Final pH (S.U.)	7.22							
Tot. Resid. Chlorine (mg/l)[5]	N.D.							
Sample Filtered (60 um)?	No							
Date/Time	6/29/08 1930							
Initials	PD							

DILUTION WATER CHARACTERISTICS								
Vat Number	1							
Temperature (°C)	26							
Conductivity (uS/cm)	298							
D.O. (mg/l)	8.2							
pH (S.U.)	7.70							
Hardness (mg/l $CaCO_3$)	100							
Alkalinity (mg/l $CaCO_3$)	56							
Date/Time	6/29/08 1930							
Initials	PD							

[1]Q.L. = Quantification Limit, N.D. = Not Determined/Measured, NA = Not Applicable
[2]Bottle number = 9th or 9th and 10th characters of Laboratory Sample I.D. (e.g. "A", "A-1", "A-2"; see SOP SPLS202)
[3]C-Clear, O-Opaque, T-Turbid, S-Solids (Sl-Slight, M-Moderate, H-Heavy), Y-Yellow, B-Brown, Bl-Black, G-Green
[4]Conductivity measured on first use of sample only
[5]Total residual chlorine measured after sample prep only if present in initial sample characterization

PROJECT I.D. FRTMA803
(First 8 characters of Laboratory Sample ID)

Client: Primary Laboratories, Inc. 080715
Project ID: PRIM0804
Client Sample ID: Doswell All American Truck Plaza Outfall 901
Permit No: VA0052906
Sample Period: 7/7/08 Wet Weather

CBI
Coastal Bioanalysts, Inc.

Report of Analysis: Whole Effluent Toxicity (WET)

Submitted To:	Prepared By:
Mr. David Stoneman Primary Laboratories, Inc. 7423 Lee Davis Road Mechanicsville, VA 23111	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Acute Test Results				
Species-Test Method	48-h LC50	95% C.L.	$T.U._{Ac}$	NOAEC
C. dubia EPA 2002.0	>100	N/A	1.00	100
P. promelas EPA 2000.0	>100	N/A	1.00	100

*Note: Details regarding test conduct and data analysis provided in attached bench sheets and printouts as applicable.

Acute Test Biological Summary Data		Sample Concentration (%)					
Species-Method	Endpoint	Control	6.5	13	25	50	100
C. dubia EPA 2002.0	Survival (%):	100	100	100	100	100	100
P. promelas EPA 2000.0	Survival (%):	100	100	100	100	100	95

Test Information Species-Method	Start Date/Time End Date/Time	Organism Source	Hatch/Harvest Date/Time	Acclimation Temp.	Acclimation Water	Test Aerated?
C. dubia EPA 2002.0	7/8/08 1435 7/10/08 1440	CBI Stock	7/7/08 1615 7/8/08 0935	25° C	Mod. Hard Syn. FW	No
P. promelas EPA 2000.0	7/8/08 1415 7/10/08 1420	CBI Stock	6/30/08 1100 7/1/08 1100	25° C	Mod. Hard Syn. FW	No

0

Sample/Dilution Water Data	Acute Test	
Water Quality Parameter (Units)	Sample	Dilution Water
Arrival Temperature (°C)	4	N/A
Use Temperature (°C)	25	25
Conductivity (µS/cm)	195	294
pH (S.U.)	6.99	7.65
Dissolved Oxygen (mg/l)	8.2	8.2
Total Hardness (mg/l as $CaCO_3$)	36	90
Alkalinity (mg/l as $CaCO_3$)	33	61
Total Residual Chlorine (mg/l)	<Q.L.	N/A
Ammonia (mg/l NH_3-N)	<1.0	N/A

*Dilution water = Moderately hard synthetic freshwater made with ASTM Type I deionized water

Sample Aging/Use/Pretreatment				
CBI Sample I.D.	Collection Date/Time	Date(s)/Time(s) 1st Used in Tests	Date(s)/Time(s) Used in Renewals	Sample Adjustments
PRIM0804-A	7/7/08 1115	7/8/08 1415, 1435	N/A	Aerated 0.5 min

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0804
Client Sample ID: Doswell All American Truck Plaza Outfall 901
Permit No: VA0052906
Sample Period: 7/7/08 Wet Weather

Coastal Bioanalysts, Inc.

Acute Test Water Quality (Mean/Std. Dev.)												
Test:	*C. dubia* 2002.0						*P. promelas* 2000.0					
% Conc:	Cont.	6.5	13	25	50	100	Cont.	6.5	13	25	50	100
Temp.	25	25	25	25	25	25	25	25	26	26	26	26
(°C)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
D.O.	8.0	7.9	7.9	7.9	7.9	7.9	8.0	7.9	7.8	7.6	7.5	7.4
(mg/l)	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.5	0.6	0.7
pH	7.76	7.73	7.71	7.65	7.55	7.42	7.74	7.73	7.67	7.63	7.55	7.33
(S.U.)	0.01	0.08	0.13	0.16	0.22	0.34	0.04	0.06	0.14	0.09	0.08	0.26

Acute Test QA/QC: Reference Toxicant: KCl Units: mg/l Test Organism Source: CBI Stock Cultures					
Species-Method (Ref. Test Date)	Data Source	% Control Survival	48-h LC50	95% C.L./A.L. For LC50	RTT in Control?
C. dubia 2002.0	RTT	95	549	481-608	Yes
(6/24/08-6/26/08)	CC	100	570	519-622	
P. promelas 2000.0	RTT	100	1005	913-1107	Yes
(6/24/08-6/26/08)	CC	100	913	816-1011	

Note: RTT = Reference Toxicant Test, CC = Control Chart

The results of analysis contained within this report relate only to the sample as received in the laboratory. This report shall not be reproduced except in full without written approval from the laboratory.

APPROVED:

Peter F. De Lisle, Ph.D.
Technical Director

7/18/08
Date

GLOSSARY OF TERMS AND ABBREVIATIONS

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Control chart: A cumulative summary chart of results from QC tests with reference toxicants. The results of a given reference toxicant test are compared to the control chart mean value and 95% Acceptance Limits (A.L.) (mean ± 2 standard deviations).

LC50: The concentration of sample or chemical, calculated from the data set using statistical models, causing a 50% reduction in test organism survival. The lower the LC50, the more toxic the chemical or sample. Units are same as test concentration units. Note: The LC50 value must always be associated with the duration of exposure. Thus 48-h LC50, 96-h LC50, etc. are calculated.

N/A: Not applicable. N/D: Not determined or measured.

NOAEC: No-observable-acute-effect-concentration. The highest concentration of sample or chemical in an acute test dilution series in which the test organisms exhibit no statistically significant reduction in the test end point (e.g. survival) compared to control organisms. Units are same as test concentration units.

Q.L.: Quantitation Limit. Level, concentration, or quantity of a target variable (analyte) that can be reported at a specified degree of confidence.

T.U.: Toxic units. Expresses the relative toxicity of an effluent in such a manner that the larger the toxic unit value the more toxic the effluent. $T.U._{Ac} = 100/LC50$. $T.U._{Chr} = 100/NOEC$. A dimensionless unit.

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0801
Client Sample ID: Doswell All American Truck Plaza Outfall 001 – 1st Quarter
Permit No: VA0052906
Sample Period: 2/28/08

Coastal Bioanalysts, Inc.

Report of Analysis: Whole Effluent Toxicity (DRY)

Submitted To:	Prepared By:
Mr. David Stoneman Primary Laboratories, Inc. 7423 Lee Davis Road Mechanicsville, VA 23111	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Acute Test Results

Species-Test Method	48-h LC50	95% C.L.	$T.U._{Ac}$	NOAEC
C. dubia EPA 2002.0	>100	N/A	1.00	100
P. promelas EPA 2000.0	>100	N/A	1.00	100

*Note: Details regarding test conduct and data analysis provided in attached bench sheets and printouts as applicable.

Acute Test Biological Summary Data

Species-Method	Endpoint	Sample Concentration (%) Control	6.5	13	25	50	100
C. dubia EPA 2002.0	Survival (%):	100	100	100	100	100	100
P. promelas EPA 2000.0	Survival (%):	100	100	100	100	100	100

Test Information Species-Method	Start Date/Time End Date/Time	Organism Source	Hatch/Harvest Date/Time	Acclimation Temp.	Acclimation Water	Test Aerated?
C. dubia EPA 2002.0	2/29/08 1455 3/2/08 1500	CBI Stock	2/28/08 1605 2/29/08 0930	25° C	Mod. Hard Syn. FW	No
P. promelas EPA 2000.0	2/29/08 1440 3/2/08 1450	CBI Stock	2/20/08 1100 2/21/08 1100	25° C	Mod. Hard Syn. FW	No

Sample/Dilution Water Data	Acute Test	
Water Quality Parameter (Units)	Sample	Dilution Water
Arrival Temperature (°C)	3	N/A
Use Temperature (°C)	25	25
Conductivity (µS/cm)	556	297
pH (S.U.)	7.39	8.02
Dissolved Oxygen (mg/l)	8.2	8.2
Total Hardness (mg/l as $CaCO_3$)	66	86
Alkalinity (mg/l as $CaCO_3$)	13	59
Total Residual Chlorine (mg/l)	<Q.L.	N/A
Ammonia (mg/l NH_3-N)	<1.0	N/A

*Dilution water = Moderately hard synthetic freshwater made with ASTM Type I deionized water

Sample Aging/Use/Pretreatment

CBI Sample I.D.	Collection Date/Time	Date(s)/Time(s) 1st Used in Tests	Date(s)/Time(s) Used in Renewals	Sample Adjustments
PRIM0801-A	2/28/08 1549	2/29/08 1440, 1455	N/A	Aerated 3 min

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0801
Client Sample ID: Doswell All American Truck Plaza Outfall 001
Permit No: VA0052906
Sample Period: 2/28/08

Coastal Bioanalysts, Inc.

Acute Test Water Quality (Mean/Std. Dev.)												
Test:	*C. dubia* 2002.0						*P. promelas* 2000.0					
% Conc:	Cont.	6.5	13	25	50	100	Cont.	6.5	13	25	50	100
Temp.	25	25	25	25	25	25	25	25	25	25	25	25
(°C)	0	0	0	0	0	0	0	0	0	0	0	0
D.O.	8.1	8.2	8.1	8.1	8.1	8.0	8.1	8.1	8.0	8.0	7.9	7.9
(mg/l)	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2
pH	8.09	8.06	8.05	7.99	7.84	7.60	7.89	7.87	7.81	7.74	7.65	7.43
(S.U.)	0.05	0.08	0.08	0.08	0.12	0.19	0.18	0.15	0.17	0.16	0.09	0.02

Acute Test QA/QC: Reference Toxicant: KCl Units: mg/l Test Organism Source: CBI Stock Cultures					
Species-Method (Ref. Test Date)	Data Source	% Control Survival	48-h LC50	95% C.L./A.L. For LC50	RTT in Control?
C. dubia 2002.0	RTT	100	506	392-560	Yes
(2/20/08-2/22/08)	CC	100	576	501-652	
P. promelas 2000.0	RTT	100	847	777-925	Yes
(2/19/08-2/21/08)	CC	100	911	828-995	

Note: RTT = Reference Toxicant Test, CC = Control Chart

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APPROVED:

Peter F. De Lisle, Ph.D.
Technical Director

3/7/08
Date

GLOSSARY OF TERMS AND ABBREVIATIONS

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Control chart: A cumulative summary chart of results from QC tests with reference toxicants. The results of a given reference toxicant test are compared to the control chart mean value and 95% Acceptance Limits (A.L.) (mean ± 2 standard deviations).

LC50: The concentration of sample or chemical, calculated from the data set using statistical models, causing a 50% reduction in test organism survival. The lower the LC50, the more toxic the chemical or sample. Units are same as test concentration units. Note: The LC50 value must always be associated with the duration of exposure. Thus 48-h LC50, 96-h LC50, etc. are calculated.

N/A: Not applicable. N/D: Not determined or measured.

NOAEC: No-observable-acute-effect-concentration. The highest concentration of sample or chemical in an acute test dilution series in which the test organisms exhibit no statistically significant reduction in the test end point (e.g. survival) compared to control organisms. Units are same as test concentration units.

Q.L.: Quantitation Limit. Level, concentration, or quantity of a target variable (analyte) that can be reported at a specified degree of confidence.

T.U.: Toxic units. Expresses the relative toxicity of an effluent in such a manner that the larger the toxic unit value the more toxic the effluent. $T.U._{Ac} = 100/LC50$. $T.U._{Ch} = 100/NOEC$. A dimensionless unit.

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0802
Client Sample ID: Doswell All American Truck Plaza Outfall 001
Permit No: VA0052906
Sample Period: 4/22/08

901 - 1st Quarter

D804244-1

Coastal Bioanalysts, Inc.

Report of Analysis: Whole Effluent Toxicity (WET)

Submitted To:	Prepared By:
Mr. David Stoneman Primary Laboratories, Inc. 7423 Lee Davis Road Mechanicsville, VA 23111	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Acute Test Results				
Species-Test Method	48-h LC50	95% C.L.	$T.U._{Ac}$	NOAEC
C. dubia EPA 2002.0	>100	N/A	1.00	100
P. promelas EPA 2000.0	>100	N/A	1.00	100

Note: Details regarding test conduct and data analysis provided in attached bench sheets and printouts as applicable.

Acute Test Biological Summary Data		Sample Concentration (%)					
Species-Method	Endpoint	Control	6.5	13	25	50	100
C. dubia EPA 2002.0	Survival (%):	100	100	100	100	100	100
P. promelas EPA 2000.0	Survival (%):	100	100	100	100	100	100

Test Information Species-Method	Start Date/Time End Date/Time	Organism Source	Hatch/Harvest Date/Time	Acclimation Temp.	Acclimation Water	Test Aerated?
C. dubia EPA 2002.0	4/23/08 1400 4/25/08 1425	CBI Stock	4/22/08 1635 4/23/08 0925	25° C	Mod. Hard Syn. FW	No
P. promelas EPA 2000.0	4/23/08 1410 4/25/08 1435	CBI Stock	4/13/08 1200 4/14/08 1200	25° C	Mod. Hard Syn. FW	No

Sample/Dilution Water Data	Acute Test	
Water Quality Parameter (Units)	Sample	Dilution Water
Arrival Temperature (°C)	2	N/A
Use Temperature (°C)	25	25
Conductivity (µS/cm)	150	287
pH (S.U.)	6.77	7.75
Dissolved Oxygen (mg/l)	8.2	8.2
Total Hardness (mg/l as $CaCO_3$)	66	100
Alkalinity (mg/l as $CaCO_3$)	23	59
Total Residual Chlorine (mg/l)	<Q.L.	N/A
Ammonia (mg/l NH_3-N)	<1.0	N/A

Dilution water = Moderately hard synthetic freshwater made with ASTM Type I deionized water

Sample Aging/Use/Pretreatment				
CBI Sample I.D.	Collection Date/Time	Date(s)/Time(s) 1st Used in Tests	Date(s)/Time(s) Used in Renewals	Sample Adjustments
PRIM0802-A	4/22/08 1155	4/23/08 1400, 1410	N/A	Aerated 2 min

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0802
Client Sample ID: Doswell All American Truck Plaza Outfall 001
Permit No: VA0052906
Sample Period: 4/22/08

CBI
Coastal Bioanalysts, Inc.

Acute Test Water Quality (Mean/Std. Dev.)

Test:	*C. dubia* 2002.0						*P. promelas* 2000.0					
% Conc:	Cont.	6.5	13	25	50	100	Cont.	6.5	13	25	50	100
Temp. (°C)	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0	25 0
D.O. (mg/l)	8.1 0.1	8.1 0.1	8.1 0.1	8.1 0.1	8.0 0.2	8.0 0.2	8.1 0.1	8.1 0.1	8.1 0.1	8.1 0.1	8.0 0.2	8.0 0.2
pH (S.U.)	7.84 0.06	7.85 0.05	7.83 0.03	7.75 0.11	7.64 0.11	6.88 0.33	7.74 0.10	7.73 0.10	7.69 0.10	7.60 0.05	7.52 0.04	6.75 0.22

Acute Test QA/QC: Reference Toxicant: KCl Units: mg/l Test Organism Source: CBI Stock Cultures

Species-Method (Ref. Test Date)	Data Source	% Control Survival	48-h LC50	95% C.L./A.L. For LC50	RTT in Control?
C. dubia 2002.0 (4/18/08-4/20/08)	RTT	100	560	517-607	Yes
	CC	100	575	494-656	
P. promelas 2000.0 (4/18/08-4/20/08)	RTT	100	944	885-1006	Yes
	CC	100	908	820-997	

Note: RTT = Reference Toxicant Test, CC = Control Chart

The results of analysis contained within this report relate only to the sample as received in the laboratory. This report shall not be reproduced except in full without written approval from the laboratory.

APPROVED:

Peter F. De Lisle, Ph.D.
Technical Director

9/25/08
Date

GLOSSARY OF TERMS AND ABBREVIATIONS

A.L. (Acceptance Limits): The results of a given reference toxicant test are compared to the control chart mean value ± 2 standard deviations. These limits approximate the 95% probability limits for the "true" reference toxicant value.

C.L. (Confidence Limits): These are the probability limits, based on the data set and statistical model employed, that the "true value" lies within the limits specified. Typically limits are based on 95% or 99% probabilities.

Control chart: A cumulative summary chart of results from QC tests with reference toxicants. The results of a given reference toxicant test are compared to the control chart mean value and 95% Acceptance Limits (A.L.) (mean ± 2 standard deviations).

LC50: The concentration of sample or chemical, calculated from the data set using statistical models, causing a 50% reduction in test organism survival. The lower the LC50, the more toxic the chemical or sample. Units are same as test concentration units. Note: The LC50 value must always be associated with the duration of exposure. Thus 48-h LC50, 96-h LC50, etc. are calculated.

N/A: Not applicable. *N/D*: Not determined or measured.

NOAEC: No-observable-acute-effect-concentration. The highest concentration of sample or chemical in an acute test dilution series in which the test organisms exhibit no statistically significant reduction in the test end point (e.g. survival) compared to control organisms. Units are same as test concentration units.

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EPA Laboratory ID: VA01116

0807036

Client: Primary Laboratories, Inc.
Project ID: PRIM0803
Client Sample ID: Doswell All American Truck Plaza Outfall 001 - 2nd Quarter
Permit No: VA0052906
Sample Period: 6/26/08 Dry Weather

Coastal Bioanalysts, Inc.

Report of Analysis: Whole Effluent Toxicity (~~WET~~ DRY)

Submitted To:	Prepared By:
Mr. David Stoneman Primary Laboratories, Inc. 7423 Lee Davis Road Mechanicsville, VA 23111	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Acute Test Results*				
Species-Test Method	48-h LC50	95% C.L.	$T.U._{Ac}$	NOAEC
C. dubia EPA 2002.0	>100	N/A	1.00	100
P. promelas EPA 2000.0	>100	N/A	1.00	100

*Note: Details regarding test conduct and data analysis provided in attached bench sheets and printouts as applicable.

AcuteTest Biological Summary Data		Sample Concentration (%)					
Species-Method	Endpoint	Control	6.5	13	25	50	100
C. dubia EPA 2002.0	Survival (%):	100	100	100	100	100	100
P. promelas EPA 2000.0	Survival (%):	100	100	100	100	100	100

Test Information Species-Method	Start Date/Time End Date/Time	Organism Source	Hatch/Harvest Date/Time	Acclimation Temp.	Acclimation Water	Test Aerated?
C. dubia EPA 2002.0	6/27/08 1500 6/29/08 1500	CBI Stock	6/26/08 1620 6/27/08 0925	25° C	Mod. Hard Syn. FW	No
P. promelas EPA 2000.0	6/27/08 1510 6/29/08 1510	CBI Stock	6/19/08 1000 6/20/08 1000	25° C	Mod. Hard Syn. FW	Yes

0

Sample/Dilution Water Data	Acute Test	
Water Quality Parameter (Units)	Sample	Dilution Water*
Arrival Temperature (°C)	1	N/A
Use Temperature (°C)	26	26
Conductivity (µS/cm)	241	298
pH (S.U.)	7.22	7.70
Dissolved Oxygen (mg/l)	8.3	8.2
Total Hardness (mg/l as $CaCO_3$)	68	100
Alkalinity (mg/l as $CaCO_3$)	28	58
Total Residual Chlorine (mg/l)	<Q.L.	N/A
Ammonia (mg/l NH_3-N)	<1.0	N/A

*Dilution water = Moderately hard synthetic freshwater made with ASTM Type I deionized water

Sample Aging/Use/Pretreatment				
CBI Sample I.D.	Collection Date/Time	Date(s)/Time(s) 1st Used in Tests	Date(s)/Time(s) Used in Renewals	Sample Adjustments
PRIM0803-A	6/26/08 1330	6/27/08 1500, 1510	N/A	Aerated 0.5 min

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0803
Client Sample ID: Doswell All American Truck Plaza Outfall 001
Permit No: VA0052906
Sample Period: 6/26/08 Dry Weather

Coastal Bioanalysts, Inc.

Acute Test Water Quality (Mean/Std. Dev.)												
Test:	*C. dubia* 2002.0						*P. promelas* 2000.0					
% Conc:	Cont.	6.5	13	25	50	100	Cont.	6.5	13	25	50	100
Temp.	25	25	25	25	25	25	25	25	25	25	25	25
(°C)	0.6	0.6	0.6	0.6	0.6	0.6	0	0	0	0	0	0
D.O.	7.9	7.8	7.8	7.8	7.7	7.7	7.9	7.7	7.3	7.3	7.0	6.7
(mg/l)	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.8	1.1	2.0	2.6
pH	7.72	7.70	7.67	7.62	7.53	7.40	7.75	7.73	7.66	7.60	7.48	7.32
(S.U.)	0.04	0.04	0.06	0.05	0.07	0.09	0.10	0.13	0.17	0.22	0.31	0.39

Acute Test QA/QC	Reference Toxicant: KCl Units: mg/l				Test Organism Source: CBI Stock Cultures
Species-Method (Ref. Test Date)	Data Source	% Control Survival	48-h LC50	95% C.L./A.L. For LC50	RTT in Control?
C. dubia 2002.0	RTT	95	549	481-608	Yes
(6/24/08-6/26/08)	CC	100	570	519-622	
P. promelas 2000.0	RTT	100	1005	913-1107	Yes
(6/24/08-6/26/08)	CC	100	913	816-1011	

Note: RTT = Reference Toxicant Test, CC = Control Chart

The results of analysis contained within this report relate only to the sample as received in the laboratory. This report shall not be reproduced except in full without written approval from the laboratory.

APPROVED:

Peter F. De Lisle, Ph.D.
Technical Director

7/2/08
Date

GLOSSARY OF TERMS AND ABBREVIATIONS

A.L. (Acceptance Limits): The results of a given reference toxicant test are compared to the control chart mean value ± 2 standard deviations. These limits approximate the 95% probability limits for the "true" reference toxicant value.

C.L. (Confidence Limits): These are the probability limits, based on the data set and statistical model employed, that the "true value" lies within the limits specified. Typically limits are based on 95% or 99% probabilities.

Control chart: A cumulative summary chart of results from QC tests with reference toxicants. The results of a given reference toxicant test are compared to the control chart mean value and 95% Acceptance Limits (A.L.) (mean ± 2 standard deviations).

LC50: The concentration of sample or chemical, calculated from the data set using statistical models, causing a 50% reduction in test organism survival. The lower the LC50, the more toxic the chemical or sample. Units are same as test concentration units. Note: The LC50 value must always be associated with the duration of exposure. Thus 48-h LC50, 96-h LC50, etc. are calculated.

N/A: Not applicable. N/D: Not determined or measured.

NOAEC: No-observable-acute-effect-concentration. The highest concentration of sample or chemical in an acute test dilution series in which the test organisms exhibit no statistically significant reduction in the test end point (e.g. survival) compared to control organisms. Units are same as test concentration units.

Q.L.: Quantitation Limit. Level, concentration, or quantity of a target variable (analyte) that can be reported at a specified degree of confidence.

T.U.: Toxic units. Expresses the relative toxicity of an effluent in such a manner that the larger the toxic unit value the more toxic the effluent. $T.U._{Ac} = 100/LC50$. $T.U._{Ch} = 100/NOEC$. A dimensionless unit.

EPA Laboratory ID: VA01116

% Effluent	I.D.	Day 0 Live	Day 1 Live	Day 2 Live	Final % Survival
Control	C-a	5	5	5	100
	C-b	5	5	5	
	C-c	5	5	5	
	C-d	5	5	5	
6.5	1-a	5	5	5	100
	1-b	5	5	5	
	1-c	5	5	5	
	1-d	5	5	5	
13	2-a	5	5	5	100
	2-b	5	5	5	
	2-c	5	5	5	
	2-d	5	5	5	
25	3-a	5	5	5	100
	3-b	5	5	5	
	3-c	5	5	5	
	3-d	5	5	5	
50	4-a	5	5	5	100
	4-b	5	5	5	
	4-c	5	5	5	
	4-d	5	5	5	
100	5-a	5	5	5	100
	5-b	5	5	5	
	5-c	5	5	5	
	5-d	5	5	5	
	Initials:	PO	ST	bja	
	Count Time:	1505	1100	1500	Test end time

NOTES:

Parameter	Treatment I.D.	Day 0	Day 1	Day 2
Temp. (°C)	C	25	26	25
	1	25	26	25
	2	25	26	25
	3	25	26	25
	4	25	26	25
	5	25	26	25
pH (S.U.)	C	7.76	7.73	7.68
	1	7.75	7.68	7.67
	2	7.73	7.62	7.66
	3	7.66	7.56	7.64
	4	7.53	7.46	7.60
	5	7.38	7.32	7.50
D.O. (mg/l)	C	8.2	7.8	7.8
	1	8.2	7.6	7.7
	2	8.2	7.7	7.6
	3	8.2	7.6	7.6
	4	8.2	7.4	7.5
	5	8.3	7.4	7.4
Conduct. (uS/cm)	C	301		303
	1	298		
	2	294		
	3	290		
	4	272		
	5	242		250
Replicate Meas.:		S	S	C
Initials:		PO	ST	bja
TRC (mg/l) in highest conc. at end of test:				NA

Species: *Ceriodaphnia dubia*

Source: CBI stock cultures ✓

Other: _____

Brood Release: Date/time start: 6/26/08 1120

Date /time end: 6/27/08 0925

Acclimation: Water: Mod. hard syn. FW ✓

Other _____

Temperature (°C): 25

Feeding: Prior to test: YCT/*Selenastrum*
During test: Not Fed

Illumination: 16L:8D 10-20 uE/m²/s

Test chamber size: ✓ 30 ml

Solution volume: ✓ 15 ml _____ ml

Number of replicates/treatment: 4

Initial number of daphnids/replicate: 5

Randomization template number: 18

Set up: Date (Day 0): 6/27/08

Time water added: 1450

Time daphnids added: 1505

Set up by (initials): PO

TEST I.D. PRlm-0803 ACD

PIMEPHALES PROMELAS STATIC ACUTE WET TEST
NOAEC-TYPE TEST (4 REPLICATES) (APP-4REP) FORM ETF1043D

COASTAL BIOANALYSTS, INC
EFFECTIVE DATE: 11/26/07

% Effluent	I.D.	Day 0 Live	Day 1 Live	Day 2 Live	Final % Survival
Control	C-a	5	5	5	100
	C-b	5	5	5	
	C-c	5	5	5	
	C-d	5	5	5	
6.5	1-a	5	5	5	100
	1-b	5	5	5	
	1-c	5	5	5	
	1-d	5	5	5	
13	2-a	5	5	5	100
	2-b	5	5	5	
	2-c	5	5	5	
	2-d	5	5	5	

% Effluent	I.D.	Day 0 Live	Day 1 Live	Day 2 Live	Final % Survival
25	3-a	5	5	5	100
	3-b	5	5	5	
	3-c	5	5	5	
	3-d	5	5	5	
50	4-a	5	5	5	100
	4-b	5	5	5	
	4-c	5	5	5	
	4-d	5	5	5	
100	5-a	5	5	5	100
	5-b	5	5	5	
	5-c	5	5	5	
	5-d	5	5	5	
	Initials:	PP	ST	kja	
	Count Time:	1510	1030	1510	*Test End Time

NOTES:

*aeration began @ 1040

Parameter	Treatment I.D.	Day 0	Day 1	Day 2
Temp. (°C)	C	25	25	25
	1	25	25	25
	2	25	25	25
	3	25	25	25
	4	25	25	25
	5	25	25	25
pH (S.U.)	C	7.72	7.65	7.84
	1	7.75	7.59	7.84
	2	7.73	7.47	7.78
	3	7.66	7.36	7.78
	4	7.53	7.14	7.76
	5	7.58	6.91	7.68
D.O. (mg/l)	C	8.2	7.3	8.2
	1	8.2	7.0	8.0
	2	8.2	6.6	7.2
	3	8.2	5.6	8.2
	4	8.2	4.7	8.1
	5	8.3	3.7*	8.1
Conduct. (uS/cm)	C	301		297
	1	298		
	2	294		
	3	290		
	4	272		
	5	242		258
Replicate Measured:		A	B	A
Initials:		PP	ST	QS
TRC (mg/l) in highest conc. at end of test:				NA

Species: *Pimephales promelas*

Source: CBI stock cultures ✓

Other: _____

Hatch: Date/time start: 6/19/08 1000

Date /time end: 6/20/08 1000

Acclimation: Water: Mod. hard syn. FW ✓

Other _____

Temperature (°C): 25

Feeding: Prior to test: *Artemia ad libitum*
During test: Not Fed

Illumination: 16L:8D 10-20 uE/m²/s

Test chamber size: ✓ 400 ml _____ ml

Solution volume: ✓ 200 ml _____ ml

Initial number of fish/replicate: 5

Randomization template number: 1,6,7,5

Set up: Date (Day 0): 6/27/08

Time water added: 1450

Time fish added: 1510

Set up by (initials): PP

TEST I.D. Palm 8D3 -APP-4REP

EFFLUENT SAMPLE & DILUTION WATER CHARACTERISTICS
FRESHWATER TESTS

COASTAL BIOANALYSTS, INC
FORM ETF2031B EFFECTIVE DATE: 10/17/02

INITIAL SAMPLE CHARACTERIZATION					NOTES:
Sample Bottle[2]	A-1				
Tot. Resid. Chlorine (mg/l)	<QL				
Hardness (mg/l $CaCO_3$)	48				
Alkalinity (mg/l $CaCO_3$)	28				
NH_3-N (mg/l)	<1.0				
Color/Appearance[3]	C/I				
Obvious Odor?	N/D				
Date/Time	6/22/08 1000				
Initials	CM				

SAMPLE PREPARATION MEASUREMENTS (100% concentration)								
Sample Bottle	A-1							
Prep Temperature (°C)	26							
Conductivity (uS/cm)[4]	24							
D.O. (mg/l) After Warming	8.8							
Aeration Time (min)	0.5							
Adjusted D.O.	8.3							
Final pH (S.U.)	7.22							
Tot. Resid. Chlorine (mg/l)[5]	N.D.							
Sample Filtered (60 um)?	No							
Date/Time	6/27/08 1430							
Initials	PD							

DILUTION WATER CHARACTERISTICS								
Vat Number	1							
Temperature (°C)	26							
Conductivity (uS/cm)	298							
D.O. (mg/l)	8.2							
pH (S.U.)	7.70							
Hardness (mg/l $CaCO_3$)	100							
Alkalinity (mg/l $CaCO_3$)	58							
Date/Time	6/27/08 1430							
Initials	CD							

[1]Q.L. = Quantification Limit, N.D. = Not Determined/Measured, NA = Not Applicable
[2]Bottle number = 9th or 9th and 10th characters of Laboratory Sample I.D. (e.g. "A", "A-1", "A-2"; see SOP SPLS202)
[3]C-Clear, O-Opaque, T-Turbid, S-Solids (Sl-Slight, M-Moderate, H-Heavy), Y-Yellow, B-Brown, Bl-Black, G-Green
[4]Conductivity measured on first use of sample only
[5]Total residual chlorine measured after sample prep only if present in initial sample characterization

PROJECT I.D. FRTM0803
(First 8 characters of Laboratory Sample ID)

Client: Primary Laboratories, Inc.
Project ID: PRIM0804
Client Sample ID: Doswell All American Truck Plaza Outfall 901 0807153 - 2nd Quarter
Permit No: VA0052906
Sample Period: 7/7/08 Wet Weather

Coastal Bioanalysts, Inc.

Report of Analysis: Whole Effluent Toxicity (WET)

Submitted To:	Prepared By:
Mr. David Stoneman Primary Laboratories, Inc. 7423 Lee Davis Road Mechanicsville, VA 23111	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Acute Test Results				
Species-Test Method	48-h LC50	95% C.L.	$T.U._{Ac}$	NOAEC
C. dubia EPA 2002.0	>100	N/A	1.00	100
P. promelas EPA 2000.0	>100	N/A	1.00	100

Note: Details regarding test conduct and data analysis provided in attached bench sheets and printouts as applicable.

Acute Test Biological Summary Data		Sample Concentration (%)					
Species-Method	Endpoint	Control	6.5	13	25	50	100
C. dubia EPA 2002.0	Survival (%):	100	100	100	100	100	100
P. promelas EPA 2000.0	Survival (%):	100	100	100	100	100	95

Test Information Species-Method	Start Date/Time End Date/Time	Organism Source	Hatch/Harvest Date/Time	Acclimation Temp.	Acclimation Water	Test Aerated?
C. dubia EPA 2002.0	7/8/08 1435 7/10/08 1440	CBI Stock	7/7/08 1615 7/8/08 0935	25° C	Mod. Hard Syn. FW	No
P. promelas EPA 2000.0	7/8/08 1415 7/10/08 1420	CBI Stock	6/30/08 1100 7/1/08 1100	25° C	Mod. Hard Syn. FW	No

0

Sample/Dilution Water Data	Acute Test	
Water Quality Parameter (Units)	Sample	Dilution Water
Arrival Temperature (°C)	4	N/A
Use Temperature (°C)	25	25
Conductivity (µS/cm)	195	294
pH (S.U.)	6.99	7.65
Dissolved Oxygen (mg/l)	8.2	8.2
Total Hardness (mg/l as $CaCO_3$)	36	90
Alkalinity (mg/l as $CaCO_3$)	33	61
Total Residual Chlorine (mg/l)	<Q.L.	N/A
Ammonia (mg/l NH_3-N)	<1.0	N/A

Dilution water = Moderately hard synthetic freshwater made with ASTM Type I deionized water

Sample Aging/Use/Pretreatment				
CBI Sample I.D.	Collection Date/Time	Date(s)/Time(s) 1st Used in Tests	Date(s)/Time(s) Used in Renewals	Sample Adjustments
PRIM0804-A	7/7/08 1115	7/8/08 1415, 1435	N/A	Aerated 0.5 min

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0804
Client Sample ID: Doswell All American Truck Plaza Outfall 901
Permit No: VA0052906
Sample Period: 7/7/08 Wet Weather

Coastal Bioanalysts, Inc.

Acute Test Water Quality (Mean/Std. Dev.)												
Test:	*C. dubia* 2002.0						*P. promelas* 2000.0					
% Conc:	Cont.	6.5	13	25	50	100	Cont.	6.5	13	25	50	100
Temp.	25	25	25	25	25	25	25	25	26	26	26	26
(°C)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
D.O.	8.0	7.9	7.9	7.9	7.9	7.9	8.0	7.9	7.8	7.6	7.5	7.4
(mg/l)	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.5	0.6	0.7
pH	7.76	7.73	7.71	7.65	7.55	7.42	7.74	7.73	7.67	7.63	7.55	7.33
(S.U.)	0.01	0.08	0.13	0.16	0.22	0.34	0.04	0.06	0.14	0.09	0.08	0.26

Acute Test QA/QC — Reference Toxicant: KCl Units: mg/l — Test Organism Source: CBI Stock Cultures					
Species-Method (Ref. Test Date)	Data Source	% Control Survival	48-h LC50	95% C.L./A.L. For LC50	RTT in Control?
C. dubia 2002.0	RTT	95	549	481-608	Yes
(6/24/08-6/26/08)	CC	100	570	519-622	
P. promelas 2000.0	RTT	100	1005	913-1107	Yes
(6/24/08-6/26/08)	CC	100	913	816-1011	

Note: RTT = Reference Toxicant Test, CC = Control Chart

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APPROVED:

Peter F. De Lisle, Ph.D.
Technical Director

7/18/08
Date

GLOSSARY OF TERMS AND ABBREVIATIONS

A.L. (Acceptance Limits): The results of a given reference toxicant test are compared to the control chart mean value ± 2 standard deviations. These limits approximate the 95% probability limits for the "true" reference toxicant value.

C.L. (Confidence Limits): These are the probability limits, based on the data set and statistical model employed, that the "true value" lies within the limits specified. Typically limits are based on 95% or 99% probabilities.

Control chart: A cumulative summary chart of results from QC tests with reference toxicants. The results of a given reference toxicant test are compared to the control chart mean value and 95% Acceptance Limits (A.L.) (mean ± 2 standard deviations).

LC50: The concentration of sample or chemical, calculated from the data set using statistical models, causing a 50% reduction in test organism survival. The lower the LC50, the more toxic the chemical or sample. Units are same as test concentration units. Note: The LC50 value must always be associated with the duration of exposure. Thus 48-h LC50, 96-h LC50, etc. are calculated.

N/A: Not applicable. N/D: Not determined or measured.

NOAEC: No-observable-acute-effect-concentration. The highest concentration of sample or chemical in an acute test dilution series in which the test organisms exhibit no statistically significant reduction in the test end point (e.g. survival) compared to control organisms. Units are same as test concentration units.

Q.L.: Quantitation Limit. Level, concentration, or quantity of a target variable (analyte) that can be reported at a specified degree of confidence.

T.U.: Toxic units. Expresses the relative toxicity of an effluent in such a manner that the larger the toxic unit value the more toxic the effluent. $T.U._{Ac} = 100/LC50$. $T.U._{Ch} = 100/NOEC$. A dimensionless unit.

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0805
Client Sample ID: Doswell All American Truck Plaza Outfall 001 - 3rd. Quarter
Permit No: VA0052906
Sample Period: 9/29/08 Dry Weather

CBI
Coastal Bioanalysts, Inc.

Report of Analysis: Whole Effluent Toxicity (WET)

Submitted To:	Prepared By:
Mr. David Stoneman Primary Laboratories, Inc. 7423 Lee Davis Road Mechanicsville, VA 23111	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Acute Test Results

Species-Test Method	48-h LC50	95% C.L.	$T.U._{Ac}$	NOAEC
C. dubia EPA 2002.0	>100	N/A	1.00	100
P. promelas EPA 2000.0	>100	N/A	1.00	100

Note: Details regarding test conduct and data analysis provided in attached bench sheets and printouts as applicable.

Acute Test Biological Summary Data

Species-Method	Endpoint	Sample Concentration (%)					
		Control	6.5	13	25	50	100
C. dubia EPA 2002.0	Survival (%):	100	100	100	100	100	100
P. promelas EPA 2000.0	Survival (%):	100	100	100	100	100	100

Test Information Species-Method	Start Date/Time End Date/Time	Organism Source	Hatch/Harvest Date/Time	Acclimation Temp.	Acclimation Water	Test Aerated?
C. dubia EPA 2002.0	9/30/08 1520 10/2/08 1515	CBI Stock	9/29/08 1610 9/30/08 0925	25° C	Mod. Hard Syn. FW	No
P. promelas EPA 2000.0	9/30/08 1505 10/2/08 1505	CBI Stock	9/17/08 1530 9/18/08 1530	25° C	Mod. Hard Syn. FW	No

Sample/Dilution Water Data	Acute Test	
Water Quality Parameter (Units)	Sample	Dilution Water
Arrival Temperature (°C)	4	N/A
Use Temperature (°C)	26	25
Conductivity (µS/cm)	270	303
pH (S.U.)	7.40	7.79
Dissolved Oxygen (mg/l)	8.2	8.2
Total Hardness (mg/l as $CaCO_3$)	74	96
Alkalinity (mg/l as $CaCO_3$)	31	63
Total Residual Chlorine (mg/l)	<Q.L.	N/A
Ammonia (mg/l NH_3-N)	<1.0	N/A

Dilution water = Moderately hard synthetic freshwater made with ASTM Type I deionized water

Sample Aging/Use/Pretreatment

CBI Sample I.D.	Collection Date/Time	Date(s)/Time(s) 1st Used in Tests	Date(s)/Time(s) Used in Renewals	Sample Adjustments
PRIM0805-A	9/29/08 1240	9/30/08 1505, 1520	N/A	Aerated 2 min, filtered to remove indigenous organisms

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0805
Client Sample ID: Doswell All American Truck Plaza Outfall 001
Permit No: VA0052906
Sample Period: 9/29/08 Dry Weather

Coastal Bioanalysts, Inc.

Acute Test Water Quality (Mean/Std. Dev.):

Test:	*C. dubia* 2002.0						*P. promelas* 2000.0					
% Conc:	Cont.	6.5	13	25	50	100	Cont.	6.5	13	25	50	100
Temp. (°C)	25 0	25 0	25 0	25 0	25 0	25 0	25 0.6	25 0.6	25 0.6	25 0.6	25 0.6	25 0.6
D.O. (mg/l)	8.1 0.1	8.0 0.2	8.0 0.2	8.1 0.1	8.0 0.2	8.0 0.2	7.9 0.3	7.9 0.3	7.9 0.3	7.8 0.3	7.8 0.4	7.7 0.5
pH (S.U.)	7.71 0.15	7.76 0.13	7.76 0.12	7.75 0.10	7.70 0.11	7.57 0.20	7.64 0.14	7.64 0.17	7.59 0.20	7.55 0.23	7.49 0.20	7.32 0.10

Acute Test QA/QC Reference Toxicant: KCl Units: mg/l Test Organism Source: CBI Stock Cultures

Species-Method (Ref. Test Date)	Data Source	% Control Survival	48-h LC50	95% C.L./A.L. For LC50	RTT in Control?
C. dubia 2002.0 (9/2/08-9/4/08)	RTT	100	560	517-607	Yes
	CC	100	567	518-616	
P. promelas 2000.0 (9/4/08-9/6/08)	RTT	100	978	909-1052	Yes
	CC	100	918	808-1027	

Note: RTT = Reference Toxicant Test, CC = Control Chart

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APPROVED:

Peter F. De Lisle, Ph.D.
Technical Director

10/3/08
Date

GLOSSARY OF TERMS AND ABBREVIATIONS

A.L. (Acceptance Limits): The results of a given reference toxicant test are compared to the control chart mean value ± 2 standard deviations. These limits approximate the 95% probability limits for the "true" reference toxicant value.

C.L. (Confidence Limits): These are the probability limits, based on the data set and statistical model employed, that the "true value" lies within the limits specified. Typically limits are based on 95% or 99% probabilities.

Control chart: A cumulative summary chart of results from QC tests with reference toxicants. The results of a given reference toxicant test are compared to the control chart mean value and 95% Acceptance Limits (A.L.) (mean ± 2 standard deviations).

LC50: The concentration of sample or chemical, calculated from the data set using statistical models, causing a 50% reduction in test organism survival. The lower the LC50, the more toxic the chemical or sample. Units are same as test concentration units. Note: The LC50 value must always be associated with the duration of exposure. Thus 48-h LC50, 96-h LC50, etc. are calculated.

N/A: Not applicable. **N/D:** Not determined or measured.

NOAEC: No-observable-acute-effect-concentration. The highest concentration of sample or chemical in an acute test dilution series in which the test organisms exhibit no statistically significant reduction in the test end point (e.g. survival) compared to control organisms. Units are same as test concentration units.

Q.L.: Quantitation Limit. Level, concentration, or quantity of a target variable (analyte) that can be reported at a specified degree of confidence.

T.U.: Toxic units. Expresses the relative toxicity of an effluent in such a manner that the larger the toxic unit value the more toxic the effluent. $T.U._{Ac} = 100/LC50$. $T.U._{Cr} = 100/NOEC$. A dimensionless unit.

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0806
Client Sample ID: Doswell All American Truck Plaza Outfall 901 – 3rd Quarter
Permit No: VA0052906
Sample Period: 11/25/08 Wet Weather

Coastal Bioanalysts, Inc.

Report of Analysis: Whole Effluent Toxicity (WET)

Submitted To:	Prepared By:
Mr. David Stoneman Primary Laboratories, Inc. 7423 Lee Davis Road Mechanicsville, VA 23111	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Acute Test Results*				
Species-Test Method	48-h LC50	95% C.L.	$T.U._A$	NOAEC
C. dubia EPA 2002.0	>100	N/A	1.00	100
P. promelas EPA 2000.0	>100	N/A	1.00	100

*Note: Details regarding test conduct and data analysis provided in attached bench sheets and printouts as applicable.

Acute Test Biological Summary Data		Sample Concentration (%)					
Species-Method	Endpoint	Control	6.5	13	25	50	100
C. dubia EPA 2002.0	Survival (%):	100	100	100	100	100	100
P. promelas EPA 2000.0	Survival (%):	100	100	100	100	95	100

Test Information Species-Method	Start Date/Time End Date/Time	Organism Source	Hatch/Harvest Date/Time	Acclimation Temp.	Acclimation Water	Test Aerated?
C. dubia EPA 2002.0	11/26/08 1215 11/28/08 1230	CBI Stock	11/25/08 1545 11/26/08 0935	25° C	Mod. Hard Syn. FW	No
P. promelas EPA 2000.0	11/26/08 1200 11/28/08 1220	CBI Stock	11/19/08 1200 11/20/08 1200	25° C	Mod. Hard Syn. FW	No

Sample/Dilution Water Data	Acute Test	
Water Quality Parameter (Units)	Sample	Dilution Water*
Arrival Temperature (°C)	4	N/A
Use Temperature (°C)	25	25
Conductivity (µS/cm)	158	297
pH (S.U.)	6.58	7.65
Dissolved Oxygen (mg/l)	8.2	8.2
Total Hardness (mg/l as $CaCO_3$)	42	100
Alkalinity (mg/l as $CaCO_3$)	44	58
Total Residual Chlorine (mg/l)	<Q.L.	N/A
Ammonia (mg/l NH_3-N)	<1.0	N/A

*Dilution water = Moderately hard synthetic freshwater made with ASTM Type I deionized water

Sample Aging/Use/Pretreatment				
CBI Sample I.D.	Collection Date/Time	Date(s)/Time(s) 1st Used in Tests	Date(s)/Time(s) Used in Renewals	Sample Adjustments
PRIM0806-A	11/25/08 1033	11/26/08 1200, 1215	N/A	Aerated 2 min

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0806
Client Sample ID: Doswell All American Truck Plaza Outfall 901
Permit No: VA0052906
Sample Period: 11/25/08 Wet Weather

Coastal Bioanalysts, Inc.

Acute Test Water Quality (Mean/Std. Dev.)												
Test:	*C. dubia* 2002.0						*P. promelas* 2000.0					
% Conc:	Cont.	6.5	13	25	50	100	Cont.	6.5	13	25	50	100
Temp. (°C)	24 0	24 0	24 0	24 0	24 0	24 0	24 0	24 0	24 0	24 0	24 0	24 0
D.O. (mg/l)	8.0 0.3	7.9 0.4	7.9 0.3	8.0 0.3	8.0 0.3	8.0 0.3	7.7 0.6	7.7 0.7	7.7 0.7	7.3 1.1	7.2 1.1	7.2 1.2
pH (S.U.)	7.76 0.01	7.74 0.04	7.74 0.08	7.70 0.14	7.54 0.22	7.20 0.40	7.59 0.18	7.55 0.15	7.49 0.18	7.37 0.18	7.17 0.13	6.76 0.05

Acute Test QA/QC	Reference Toxicant: KCl Units: mg/l		Test Organism Source: CBI Stock Cultures		
Species-Method (Ref. Test Date)	Data Source	% Control Survival	48-h LC50	95% C.L./A.L. For LC50	RTT in Control?
C. dubia 2002.0 (11/7/08-11/9/08)	RTT	100	530	484-579	Yes
	CC	100	563	510-617	
P. promelas 2000.0 (11/7/08-11/9/08)	RTT	90	853	734-949	Yes
	CC	100	923	827-1019	

Note: RTT = Reference Toxicant Test, CC = Control Chart

The results of analysis contained within this report relate only to the sample as received in the laboratory. This report shall not be reproduced except in full without written approval from the laboratory.

APPROVED:

Peter F. De Lisle, Ph.D.
Technical Director

12/9/08
Date

GLOSSARY OF TERMS AND ABBREVIATIONS

A.L. (Acceptance Limits): The results of a given reference toxicant test are compared to the control chart mean value ± 2 standard deviations. These limits approximate the 95% probability limits for the "true" reference toxicant value.

C.L. (Confidence Limits): These are the probability limits, based on the data set and statistical model employed, that the "true value" lies within the limits specified. Typically limits are based on 95% or 99% probabilities.

Control chart: A cumulative summary chart of results from QC tests with reference toxicants. The results of a given reference toxicant test are compared to the control chart mean value and 95% Acceptance Limits (A.L.) (mean ± 2 standard deviations).

LC50: The concentration of sample or chemical, calculated from the data set using statistical models, causing a 50% reduction in test organism survival. The lower the LC50, the more toxic the chemical or sample. Units are same as test concentration units. Note: The LC50 value must always be associated with the duration of exposure. Thus 48-h LC50, 96-h LC50, etc. are calculated.

N/A: Not applicable. N/D: Not determined or measured.

NOAEC: No-observable-acute-effect-concentration. The highest concentration of sample or chemical in an acute test dilution series in which the test organisms exhibit no statistically significant reduction in the test end point (e.g. survival) compared to control organisms. Units are same as test concentration units.

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T.U.: Toxic units. Expresses the relative toxicity of an effluent in such a manner that the larger the toxic unit value the more toxic the effluent. $T.U._{Ac} = 100/LC50$. $T.U._{Chr} = 100/NOEC$. A dimensionless unit.

EPA Laboratory ID: VA01116

Coastal Bioanalysts
6400 Enterprise Court, Gloucester, VA 23061
PH: 804-694-8[illegible], FAX: 804-695-1129
www.coastalbio.com

SAMPLE INFORMATION/CHAIN-OF-CUSTODY (FORM ETF2011D Rev. 10/10/07)

Lab Sample ID (Lab Use Only): F R Z M O 8 [ ] [ ] - A
A A A A Y Y N N A

WET

FACILITY INFORMATION

CLIENT/FACILITY NAME: DAATP	CONTACT & PHONE #: Marlee A. Parker 804.353.0333
NPDES PERMIT NO:	OUTFALL # OR LOCATION: 901
SAMPLE CHLORINATED? NO / SAMPLE DECHLORINATED? NO	IF CHLORINE PRESENT UPON ARRIVAL AT LAB, DOES PERMIT SPECIFY DECHLORINATION OF SAMPLES?

TESTS REQUESTED:	SPECIES OR EPA METH #: C. dubia	ACUTE ☑	CHRONIC ☐
	SPECIES OR EPA METH #: P. promelas	ACUTE ☑	CHRONIC ☐
OTHER TESTS:			

A SPECIFIC DILUTION SERIES MAY BE REQUIRED IN THE PERMIT. A DEFAULT SERIES OF 100, 50, 25, 12.5 AND 6.3%, OR CONCENTRATIONS USED IN PRIOR TESTING, WILL BE USED UNLESS INDICATED OTHERWISE. IF IN DOUBT PLEASE ATTACH A COPY OF APPLICABLE PERMIT PAGES.

GRAB SAMPLE INFORMATION

SAMPLE DATE	SAMPLE TIME	SAMPLE VOLUME
11/25/08	10.33 am	1 gallon

COMPOSITE SAMPLE INFORMATION

COMPOSITE START DATE & TIME		COMPOSITE END DATE & TIME	
TIME OR FLOW PROPORTIONAL COMPOSITE INFORMATION	NUMBER SUBSAMPLES_____	VOL (ml) SUBSAMPLES_____	TIME INCREMENT_____
	SET VOLUME SUBSAMPLE_____	SET VOLUME FLOW_____	TOTAL VOLUME_____

FOR VARIABLE VOLUME SUBSAMPLES BASED ON FLOW (COMPOSITING "BY HAND") ATTACH SAMPLE AND FLOW INFORMATION ON SEPARATE SHEET

FIELD MEASUREMENTS

DISCHARGE TEMP (°C)	DISCHARGE pH (S.U.)	SAMPLE TEMP (°C)	SAMPLE TRC (mg/l)	DATE/TIME (e.g. 02/23/00 1835)	INITIALS
8.8 °C	7.55 SU	8.8 °C	0.0 mg/L	11/25/08 / 10.31 am	map

MEASUREMENTS MUST BE TAKEN WITHIN 15 MINUTES OF SAMPLE OR LAST SUBSAMPLE COLLECTION!

COMMENTS:

Marlee A. Parker (PRINTED NAME/AFFILIATION SAMPLER/ANALYST) — Marlee A. Parker (SIGNATURE) — 11/25/08 (DATE)

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
Marlee A. Parker	11/25/08	11:24 am	Gordon Boss 11/25/08 11:24

SHIPPING METHOD: UPS_____ FEDEX_____ HAND DELIVERY_____ OTHER_____

CONDITION ON ARRIVAL: ACCEPTABLE___ OTHER_____

SAMPLE ARRIVAL TEMP: (°C)_____ ARRIVED ON ICE? YES_____ NO_____

NOTE: It is the responsibility of the sampler to insure that samples are properly collected, preserved (>0-6° C) and shipped. Sample hold time is 36 h. Additional costs may be incurred by improper preservation, shipping or receipt of samples after 3 p.m. or on weekends and holidays.

Client: Primary Laboratories, Inc.
Project ID: PRIM0807
Client Sample ID: Doswell All American Truck Plaza Outfall 901 - 4th Quarter
Permit No: VA0052906
Sample Period: 12/11/08 Wet Weather

Coastal Bioanalysts, Inc.

Report of Analysis: Whole Effluent Toxicity (WET)

Submitted To:	Prepared By:
Mr. David Stoneman Primary Laboratories, Inc. 7423 Lee Davis Road Mechanicsville, VA 23111	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Acute Test Results*				
Species-Test Method	48-h LC50	95% C.L.	$T.U._{Ac}$	NOAEC
C. dubia EPA 2002.0	>100	N/A	1.00	100
P. promelas EPA 2000.0	>100	N/A	1.00	100

*Note: Details regarding test conduct and data analysis provided in attached bench sheets and printouts as applicable.

AcuteTest Biological Summary Data		Sample Concentration (%)					
Species-Method	Endpoint	Control	6.5	13	25	50	100
C. dubia EPA 2002.0	Survival (%):	100	100	100	100	100	100
P. promelas EPA 2000.0	Survival (%):	100	100	100	100	100	100

Test Information Species-Method	Start Date/Time End Date/Time	Organism Source	Hatch/Harvest Date/Time	Acclimation Temp.	Acclimation Water	Test Aerated?
C. dubia EPA 2002.0	12/12/08 1545 12/14/08 1540	CBI Stock	12/11/08 1730 12/12/08 1045	25° C	Mod. Hard Syn. FW	No
P. promelas EPA 2000.0	12/12/08 1535 12/14/08 1525	CBI Stock	12/3/08 0930 12/4/08 0930	25° C	Mod. Hard Syn. FW	No

Sample/Dilution Water Data	Acute Test	
Water Quality Parameter (Units)	Sample	Dilution* Water
Arrival Temperature (°C)	6	N/A
Use Temperature (°C)	25	25
Conductivity (µS/cm)	169	296
pH (S.U.)	6.47	7.67
Dissolved Oxygen (mg/l)	8.2	8.2
Total Hardness (mg/l as $CaCO_3$)	54	96
Alkalinity (mg/l as $CaCO_3$)	34	57
Total Residual Chlorine (mg/l)	<Q.L.	N/A
Ammonia (mg/l NH_3-N)	<1.0	N/A

*Dilution water = Moderately hard synthetic freshwater made with ASTM Type I deionized water

Sample Aging/Use/Pretreatment				
CBI Sample I.D.	Collection Date/Time	Date(s)/Time(s) 1st Used in Tests	Date(s)/Time(s) Used in Renewals	Sample Adjustments
PRIM0807-A	12/11/08 1035	12/12/08 1535, 1545	N/A	Aerated 1 min

EPA Laboratory ID: VA01116

Client: Primary Laboratories, Inc.
Project ID: PRIM0807
Client Sample ID: Doswell All American Truck Plaza Outfall 901
Permit No: VA0052906
Sample Period: 12/11/08 Wet Weather

Coastal Bioanalysts, Inc.

Acute Test Water Quality (Mean/Std. Dev.)												
Test:	*C. dubia* 2002.0						*P. promelas* 2000.0					
% Conc:	Cont.	6.5	13	25	50	100	Cont.	6.5	13	25	50	100
Temp.	25	25	25	25	25	25	25	25	25	25	25	25
(°C)	0	0	0	0	0	0	0	0	0	0	0	0
D.O.	8.0	8.0	8.0	7.9	7.9	7.9	7.7	7.7	7.4	7.2	7.3	7.3
(mg/l)	0.2	0.3	0.3	0.3	0.3	0.3	0.6	0.6	0.7	0.9	0.9	1.0
pH	7.68	7.65	7.57	7.50	7.29	6.97	7.56	7.48	7.42	7.30	7.09	6.76
(S.U.)	0.05	0.07	0.16	0.24	0.36	0.42	0.10	0.10	0.07	0.11	0.18	0.24

Acute Test QA/QC	Reference Toxicant: KCl Units: mg/l	Test Organism Source: CBI Stock Cultures			
Species-Method (Ref. Test Date)	Data Source	% Control Survival	48-h LC50	95% C.L./A.L. For LC50	RTT in Control?
C. dubia 2002.0	RTT	100	530	484-579	Yes
(11/7/08-11/9/08)	CC	100	563	510-617	
P. promelas 2000.0	RTT	90	853	734-949	Yes
(11/7/08-11/9/08)	CC	100	923	827-1019	

Note: RTT = Reference Toxicant Test, CC = Control Chart

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APPROVED

Peter F. De Lisle, Ph.D.
Technical Director

12/14/08
Date

GLOSSARY OF TERMS AND ABBREVIATIONS

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LC50: The concentration of sample or chemical, calculated from the data set using statistical models, causing a 50% reduction in test organism survival. The lower the LC50, the more toxic the chemical or sample. Units are same as test concentration units. Note: The LC50 value must always be associated with the duration of exposure. Thus 48-h LC50, 96-h LC50, etc. are calculated.

N/A: Not applicable. **N/D:** Not determined or measured.

NOAEC: No-observable-acute-effect-concentration. The highest concentration of sample or chemical in an acute test dilution series in which the test organisms exhibit no statistically significant reduction in the test end point (e.g. survival) compared to control organisms. Units are same as test concentration units.

Q.L.: Quantitation Limit. Level, concentration, or quantity of a target variable (analyte) that can be reported at a specified degree of confidence.

T.U.: Toxic units. Expresses the relative toxicity of an effluent in such a manner that the larger the toxic unit value the more toxic the effluent. $T.U._{Ac} = 100/LC50$. $T.U._{Chr} = 100/NOEC$. A dimensionless unit.

Client: Primary Laboratories, Inc.
Project ID: PRIM0808
Client Sample ID: Doswell All American Truck Plaza Outfall 001 — 4th Quarter
Permit No: VA0052906
Sample Period: 12/30/08 Dry Weather

Coastal Bioanalysts, Inc.

Report of Analysis: Whole Effluent Toxicity (WET)

Submitted To:	Prepared By:
Mr. David Stoneman Primary Laboratories, Inc. 7423 Lee Davis Road Mechanicsville, VA 23111	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Acute Test Results*				
Species-Test Method	48-h LC50	95% C.L.	$T.U._{Ac}$	NOAEC
C. dubia EPA 2002.0	>100	N/A	1.00	100
P. promelas EPA 2000.0	>100	N/A	1.00	100

*Note: Details regarding test conduct and data analysis provided in attached bench sheets and printouts as applicable.

AcuteTest Biological Summary Data		Sample Concentration (%)					
Species-Method	Endpoint	Control	6.5	13	25	50	100
C. dubia EPA 2002.0	Survival (%):	100	100	100	85	100	100
P. promelas EPA 2000.0	Survival (%):	100	100	100	100	100	100

Test Information Species-Method	Start Date/Time End Date/Time	Organism Source	Hatch/Harvest Date/Time	Acclimation Temp.	Acclimation Water	Test Aerated?
C. dubia EPA 2002.0	12/31/08 1445 1/2/09 1445	CBI Stock	12/30/08 1525 12/31/08 1100	25° C	Mod. Hard Syn. FW	No
P. promelas EPA 2000.0	12/31/08 1430 1/2/09 1430	CBI Stock	12/18/08 1130 12/19/08 1130	25° C	Mod. Hard Syn. FW	No

Sample/Dilution Water Data	Acute Test	
Water Quality Parameter (Units)	Sample	Dilution* Water
Arrival Temperature (°C)	2	N/A
Use Temperature (°C)	24	25
Conductivity (µS/cm)	273	300
pH (S.U.)	6.55	7.59
Dissolved Oxygen (mg/l)	7.8	8.2
Total Hardness (mg/l as $CaCO_3$)	78	92
Alkalinity (mg/l as $CaCO_3$)	46	60
Total Residual Chlorine (mg/l)	<Q.L.	N/A
Ammonia (mg/l NH_3-N)	1.1	N/A

*Dilution water = Moderately hard synthetic freshwater made with ASTM Type I deionized water

Sample Aging/Use/Pretreatment				
CBI Sample I.D.	Collection Date/Time	Date(s)/Time(s) 1st Used in Tests	Date(s)/Time(s) Used in Renewals	Sample Adjustments
PRIM0808-A	12/30/08 1040	12/31/08 1430, 1445	N/A	N/A

Client: Primary Laboratories, Inc.
Project ID: PRIM0808
Client Sample ID: Doswell All American Truck Plaza Outfall 001
Permit No: VA0052906
Sample Period: 12/30/08 Dry Weather

Coastal Bioanalysts, Inc.

Acute Test Water Quality (Mean/Std. Dev.)												
Test:	*C. dubia* 2002.0						*P. promelas* 2000.0					
% Conc:	Cont.	6.5	13	25	50	100	Cont.	6.5	13	25	50	100
Temp.	25	25	25	25	25	25	25	25	25	25	25	25
(°C)	0	0	0	0	0	0	0	0	0	0	0	0
D.O.	8.0	8.0	8.0	7.9	7.8	7.8	7.2	7.5	7.1	7.2	7.2	6.9
(mg/l)	0.3	0.3	0.3	0.2	0.2	0.1	0.9	0.6	1.0	0.8	0.7	0.8
pH	7.61	7.57	7.50	7.41	7.25	6.99	7.41	7.34	7.24	7.14	7.00	6.69
(S.U.)	0.15	0.06	0.04	0.17	0.29	0.51	0.35	0.27	0.23	0.12	0.12	0.27

Acute Test QA/QC	Reference Toxicant: KCl	Units: mg/l	Test Organism Source: CBI Stock Cultures		
Species-Method (Ref. Test Date)	Data Source	% Control Survival	48-h LC50	95% C.L./A.L. For LC50	RTT in Control?
C. dubia 2002.0	RTT	100	560	517-607	Yes
(12/19/08-12/21/08)	CC	100	560	501-612	
P. promelas 2000.0	RTT	90	870	765-956	Yes
(12/19/08-12/21/08)	CC	100	919	819-1020	

Note: RTT = Reference Toxicant Test, CC = Control Chart

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APPROVED:

Peter F. De Lisle, Ph.D.
Technical Director

1/5/09
Date

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N/A: Not applicable. **N/D:** Not determined or measured.

NOAEC: No-observable-acute-effect-concentration. The highest concentration of sample or chemical in an acute test dilution series in which the test organisms exhibit no statistically significant reduction in the test end point (e.g. survival) compared to control organisms. Units are same as test concentration units.

Q.L.: Quantitation Limit. Level, concentration, or quantity of a target variable (analyte) that can be reported at a specified degree of confidence.

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EPA Laboratory ID: VA01116

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated industrial wastewater and stormwater into a water body in Hanover County, Virginia.

PUBLIC COMMENT PERIOD: XXX, 2013 to XXX, 2013

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Industrial Wastewater and Stormwater issued by DEQ, under the authority of the State Water Control Board

APPLICANT NAME, ADDRESS AND PERMIT NUMBER: Mr. Gurdip Singh, PO Box 37, Doswell, VA 23047, VA0052906

NAME AND ADDRESS OF FACILITY: Doswell Truck Stop LLC, 10222 Kings Dominion Blvd, Doswell, VA 23047

PROJECT DESCRIPTION: Mr. Gurdip Singh has applied for a reissuance of a permit for the private Doswell Truck Stop LLC. The applicant proposes to release treated industrial wastewater and storm water at a rate of 0.004 million gallons per day into a water body. The facility proposes to release the treated industrial wastewaters and storm water in the North Anna River, UT in Hanover County in the York River watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: Flow, pH, Total Petroleum Hydrocarbons- Diesel Range Organics (TPH-DRO), Naphthalene, Total Suspended Solids (TSS), Total Recoverable Nickel, Total Residual Chlorine, Dissolved Zinc, Total Hardness, and Dissolved Copper.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by hand-delivery, e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. A public hearing may be held, including another comment period, if public response is significant, based on individual requests for a public hearing, and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: The public may review the draft permit and application at the DEQ-Piedmont Regional Office by appointment, or may request electronic copies of the draft permit and fact sheet.
Name: Emilee Adamson
Address: DEQ-Piedmont Regional Office, 4949-A Cox Rd, Glen Allen, VA 23060
Phone: (804) 527-5072 E-mail: Emilee.Adamson@deq.virginia.gov Fax: (804) 527-5106

DCR
Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

Web Project ID: WEB0000000799

Client Project Number: VA0052906

PROJECT INFORMATION

TITLE: Doswell Truck Stop

DESCRIPTION: This is a reissuance of an existing industrial minor permit. There is no mixing zone associated with this discharge.

Chlorination and/or UV disinfection is not utilized because the permit is industrial in nature.

EXISTING SITE CONDITIONS: Storm water discharge to an unnamed tributary to the North Anna River.

QUADRANGLES: Ashland

COUNTIES: Hanover

Latitude/Longitude (DMS): 37°50'56.6672"N / 77°26'50.8670"W

Acreage: 14 acres

Comments:

Attachment 11

REQUESTOR INFORMATION

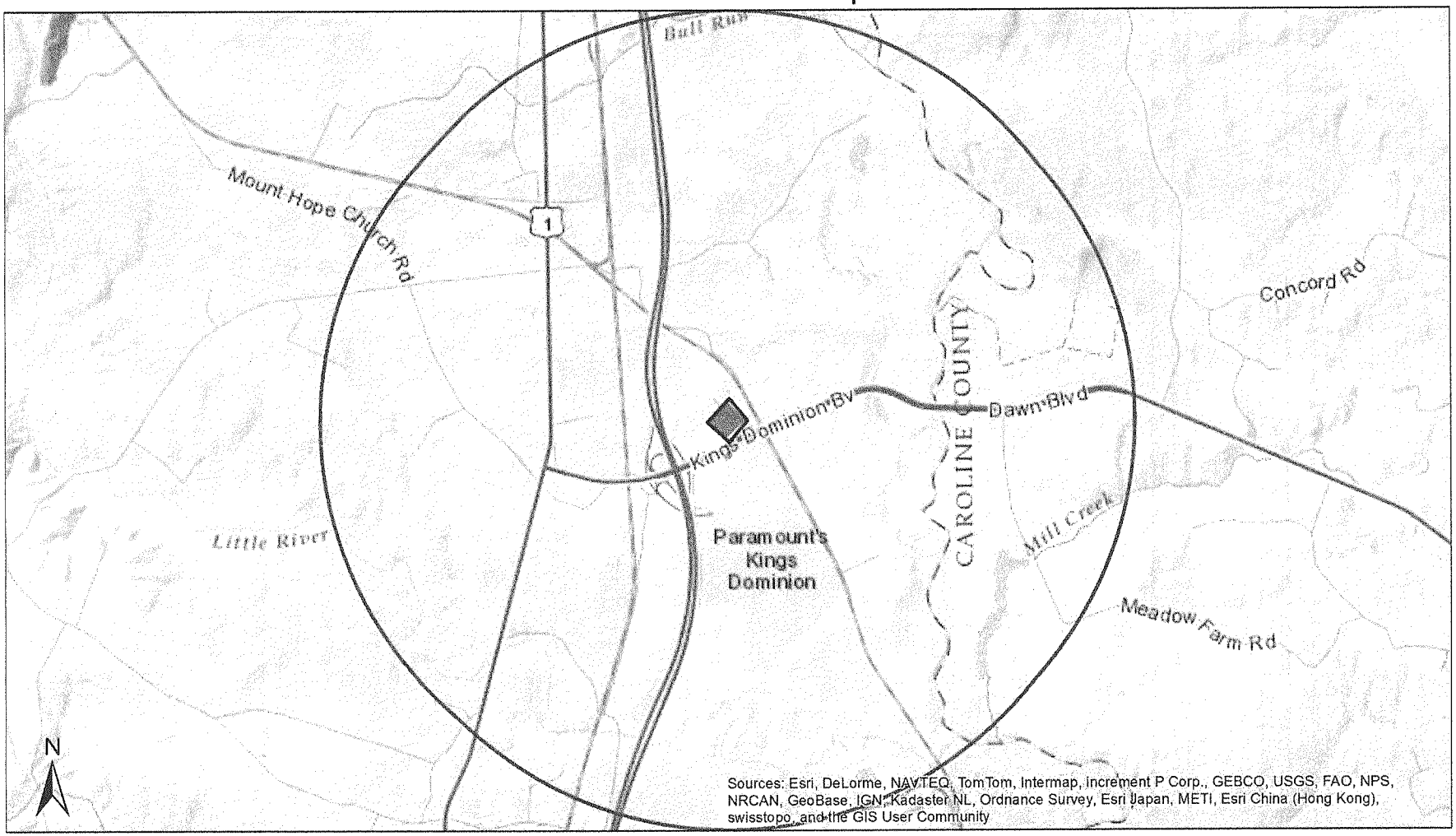
Priority: N	Tier Level: Tier II	Tax ID:
Contact Name: Susan Mackert		
Company Name: Virginia DEQ		
Address: 13901 Crown Court		
City: Woodbridge	State: VA	Zip: 20112
Phone: (703) 583-3853	Fax: (703) 583-3821	Email: susan.mackert@deq.virginia.gov

Conservation Site	Site Type	Brank	Acreage	Listed Species Presence
Natural Heritage Screening Features within Search Radius				

Site Name	Group Name	Common Name	Scientific Name	GRANK	SRANK	Fed Status	State Status	EO Rank	Last Obs Date	Precision
Natural Heritage Resources within Search Radius										

Intersecting Predictive Models
Predictive Model Results

Doswell Truck Stop



Project Area
Buffered Project Area
NH Screening Features
Conservation Site
GLNHR
SCU

1:54,393

0 0.45 0.9 1.8 mi

0 0.75 1.5 3 km

Quads: Ashland

Counties: Hanover

Company: Virginia DEQ

Lat/Long: 375056 / -772650

Douglas W. Domenech
Secretary of Natural Resources

David A. Johnson
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

The project mapped as part of this report has been searched against the Department of Conservation and Recreation's Biotics Data System for occurrences of natural heritage resources in the vicinity of the area indicated for this project. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in Biotics, natural heritage resources have not been documented within two miles of the identified project boundaries. In addition, the project area does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the Virginia Department of Conservation and Recreation (DCR), DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

Any absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks additional natural heritage resources. New and updated information is continually added to Biotics. Please revisit this website or contact DCR for an update on this natural heritage information if a significant amount of time passes (DCR recommends no more than one year) before it is utilized.

The Virginia Department of Game and Inland Fisheries maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters, that may contain information not documented in the Natural Heritage Data Explorer. Their database may be accessed from http://vafwis.org/fwis/ or contact Gladys Cason (804-367-0909 or Gladys.Cason@dgif.virginia.gov).

Thank you for submitting your project to the Virginia Department of Conservation and Recreation's Natural Heritage Data Explorer Web Service. Should you have any questions or concerns about this report, the Data Explorer, or other Virginia Natural Heritage Program services, please contact the Natural Heritage Project Review Unit at 804-371-2708.